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THE CULTIVATOR

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LETTERS FROM MR. HORSFORD.—No. X.

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VEHICLES OF GERMANY.

Giessen, 1845.

MR. TUCKER—I proceed to redeem my promise concerning the vehicles in this part of Germany.

The Eilwagon, or Diligence, the letter and paper Post, the Familien wagon, or omnibus, the freight wagons, the farm wagons and carts, the barrows, and the carriages, differ scarcely more from each other than from corresponding vehicles with us—in nearly all of which, naturally enough, it may be thought, the superiority is ours.

Every morning at eight o'clock, the walls of all the edifices on Setters-berg* are made to echo the merry notes of the trumpet blown by the driver of a huge oblong, high two roomed, oil-cloth covered establishment, called the Eilwagon. The driver is in a kind of uniform, as indeed is every man holding any station connected with the government. His hat has a little cockade and a gay striped ribbon around. The buttons of his coat with the form of a trumpet, and from his neck, under one arm, is suspended the coiled instrument, from which, with the aid of one or two valves, he succeeds in playing a stirring air, much like that of a bugle. In an apartment immediately below him, is seated the director and two passengers, who look out both forward and on either side. Behind this apartment is another, containing six seats, from which only a window in each door can be enjoyed. All the seats are numbered and taken in the order of payment, as I think I previously mentioned. The two middle ones are furnished with cushions and supports for the head. Behind these six seats is the room for baggage. It does not, however, contain in many instances, the half, most of it being placed on top, and bound down under oil-cloth covers. Children under a certain age are excluded from this conveyance, and under no circumstances can a greater number than eight take places. Four horses, secured by rope tugs, draw this ponderous coach, at a rate, as I have already stated, I think, of about six miles per hour.

The Rothchilds and Bethmans, of Frankfort, have established a letter post between Hamburg, of Northern Germany, and Basle, in Switzerland, that exceeds by much, in the rapidity of its movements, any other conveyance here. The letter bag is carried in a springless, narrow, light, seatless, two-wheeled cart. The driver sits upon the bag, and in this comfortless way, drives his one horse through his stage, at a rate, I judge, from what I have seen, of some eight or ten miles an hour.

Of all the vehicles for transport, none made upon me at first, so deep an impression, as the freight wagons. They are of various sizes, and the least are enormous. As Giessen is situated upon the main route from all the southern valley of the Rhine through Frankfort to Hamburg, a great number necessarily pass here. I think I am safe in supposing it not less than twenty daily. Of one of the largest, drawn by six horses, I estimated, from what I could learn from the driver, that with wagon and freight, he had between six and seven tons. The horses walk as well down as up the moderate inclinations of the McAdam road, and the driver, without reins, accompanies them on foot—apprizing them, and the residents along the road, of his presence by cracking his great whip. To prevent too rapid motion down hill, a break, consisting of scantling, is pressed by a long screw upon the tire of the two hind wheels. This screw is a simple contrivance connected with the axletree, and worked by a long handle like an augur. Under the centre of the load is a long shallow basket laden with provender, and a suit of apparatus for tarring, mending, &c.,—all of which swings at an elevation of some six inches from the ground. This can be conceived when it is recollected that all the roads are McAdamized. A safeguard against ruts is provided in the law taxing the freight wagons. The tax is inversely proportioned to the breadth of the tire. Above, the wagon is thatched, and some of them are not less than seventeen feet high in the middle.

All the old private carriages, remind me of that of Napoleon, now exhibited at Madame Toussaud's, in London. They seem to have been made for war—capable of being shut entirely up—broad and strong. The modern carriages are many of them fine specimens of the art—and several, the property of Dukes, Princes, and some undefined dignitaries, would compare with the best I have seen either in England or America.

Buggies are not quite unknown, but compared with other carriages are scarcely one per cent. In Frankfort there are more.

The ordinary farm wagons are wretchedly constructed, having, with good length of axletree, a narrow bottom, less in width by more than one half, than the length of the axletree. Some of them, such as are used for large loads, have a provision for supporting the rack, or upper part of the vehicle, which accompanies all or nearly all of the freight wagons. It is a vertical rod from the extremity of the axle upwards.

There are many modifications of those thus far enumerated, which I can scarcely point out in such a letter as this, and yet I have alluded to the most prominent of the classes.

Parallel to the Eilwagon there runs an Omnibus,

* A gentle elevation upon which the Laboratory, Library, Hospital, and a number of modern buildings are erected. Though dignified with the appellation, one needs to be told of its existence, as a visitor does of Constitution Hill, in London, or it would escape recognition.

not so fleet, less commodious, and much less expensive. It evades a government law given to protect the eilwagon establishment, by running separate horses and wagons, from each succeeding station. The farm wagons are for one ox or two oxen—high or low, as the wants of the owner may be. When converted into travelling wagons, seats are suspended from the rack by cords, which contribute not inconsiderably to lessen the effect of the irregularities of the way.

Last of all, there are two classes of vehicles, yes, three, which if neglected, would give no faithful picture of Giessen or Hesse Darmstadt—the wheelbarrows, the baskets and tubs, and the panniers and bags. The latter are the exclusive possession of the donkey-drivers. The baskets and the tubs are employed in the transport of almost everything—water, coal, wood, vegetables from the garden, hay, &c., &c. They are carried on the head, and almost exclusively by females.

Wheelbarrows are most of them upon one model. Exceptions are in the additions which sometimes are employed to bring dog-power into requisition; and this is by no means in a few instances. It is quite amusing to see the faithful little animals leading the way and trailing the burthen, while the owners bearing up the handles and walking easily along, would look much better with the whole freight in charge.

In looking at the whole system of transport here, nothing impresses me more forcibly than the extreme contrast. The gentleman and peasant, the young lady of the town and the peasant girl, in suits of apparel as different as those of the sexes, I had almost said, are yet not more contrasted than dogs, horses, cattle, wagons, and carriages. Here is the result of an effort to engraft the characteristics of modern progress upon feudal repose—a field for study, to which I would gladly devote a measure of time. Yours truly,

E. N. HORSFORD.

MORGAN HORSES.

LUTHER TUCKER, ESQ.—In my letter, published in your January number, I stated that there were but four of the old Justin Morgan horse's colts which were kept as stallions. All of these I have often seen, and I now propose to give you my views of the principal points of difference between them, and of their relative qualities and merits as stock horses.

The Morgan Revenge was foaled in Claremont, N. H. His dam, then owned by one of the Goss family, was a middle sized white mare of no particular blood His color was dark bay and his general form was similar to the others. He had less action than the Woodbury or Sherman, more nearly resembling in that respect the Bulrush, from whom he differed however, in having a shorter gait. He was about 14¼ hands high, and weighed about 1000. He stood nearly all his life in New Hampshire. His colts were generally dark bay or chestnut, and were less celebrated than those of either of the other horses.

The Sherman Morgan was raised by James Sherman, of Lyndon, Vt. His dam was a chestnut colored mare, of rather light bone, said to be of English blood, and long owned by Nicholas Brown, of Providence, R. I. His color was a bright chestnut, with a very hollow back, heavier chested than the Revenge, with a straight lean head, and rather small eye, hairy legs, with good bone and muscle, and great courage and action. He was about 13¾ hands high, and weighed about 950 to 975. In his young days he was kept in the vicinity of Lyndon and Dansville, Vt. After he was bought by Mr. Bellows, of Lancaster, N. H., he stood one season, 1831, at Col. Jaques' Ten Hills Farm, and for the residue of his life was principally kept at Durham, Dover, and other places in the eastern part of New Hampshire. His stock was generally excellent, and their color was most usually bay, chestnut, or sorrel. I believe there are now but three stallions in Vermout sired by him.

The Morgan Bulrush was raised by Mr. Gifford, of Tunbridge, Vt., from a thick heavy dark bay and rather hay mare, and was foaled in 1816. His general appearance, shape, and form, correspond with those of the Revenge, but with a heavier chest, longer gait, and more hollow back; in this last respect, more nearly resembling the Sherman Horse. His legs quite hairy, height about 14 hands, and weight about 1000. His style of motion not so good as that of either of the others, but none of them excelled him in endurance. His colts have been almost invariably dark bays, and have generally inherited his peculiar qualities. Many of them have proved very fast, and they have usually made very valuable road horses, though on the average smaller than the stock of either of the others. There are at this time more stallions of his stock than of all the others put together.

The Woodbury or Burbank Morgan was foaled in Tunbridge Vt, also in 1816, from a bay mare said to weigh about 1000, a smart good driver, and then owned by a Mr. White. He was of a bright chestnut color, about 14½ hands high, weighed from 1000 to 1025, with a heavy and finely curled mane and tail, hairy legs, a large prominent eye, and very broad between the eyes; heavier quartered, and deeper flanked, with less of the sway back than either of the others. In other particulars very similar to them. He was full of nerve and action, and fine courage, was a favorite parade horse, and constantly seen in the muster field, and his gait in harness was not surpassed by either of the others. The color of his stock was most usually bay and chestnut. With the exception of one season in New Hampshire, and one or two of the last years of his life in Keesville, Alabama, where he died, he was kept nearly all the rest of his life in Vermont, and I am of the opinion that it is his branch of the Morgan stock which has mainly contributed to establish the very extensive reputation and celebrity which the Vermont Morgan horses have so justly obtained.

It is a remarkable circumstance that notwithstanding the great diversity of mares through which they have been propagated, the Justin Morgan horse has been able so clearly to impress upon his descendants to the fourth and fifth generation, his own peculiar and valuable characteristics, and it can hardly fail to carry to the minds of those familiar with such subjects the strongest conviction of his thorough bred origin.

It can scarcely be necessary to add that many animals are offered for sale and palmed off upon the unsuspecting as Morgan horses, which have not a particle of genuine Morgan blood flowing in their veins.

FREDERICK A. WIER.

Walpole, N. H., Feb. 20, 1846.

DEVON CATTLE.

L. TUCKER, ESQ.—A very erroneous idea exists among many as to the peculiar characteristics of the Devon cattle, and my object in this communication is, if possible, to correct these errors. I believe it is generally conceded that there is not their superior in any of the other improved breeds of cattle, for the road or field; but the general complaint is that they are diminutive in size, and inferior in their milking qualifications—these two, in particular, are the false notions which I wish to eradicate. I do not wish however, to be understood that I consider them as large as some other breeds; but on the other hand do contend that they are sufficiently large for any purpose required by the farmer in this country—and in fact, we think that with a given amount of keeping, they will produce more value of meat than any other breed that we are conversant with.

Perhaps it would not be improper here to state a circumstance that tends in some degree to substantiate this assertion.

On or about the 30th of March last, we had two Devon calves dropped, which we put with one cow, and they ran with her until the first of November. They were then taken from her and put with a considerable number of cattle, and fed pumpkins moderately twice a day until the middle of December, and were then fed a peck and a half of potatoes each, per day, until the 21st of January, when they were killed, and

weighed as follows:—One 460 lbs., the other, 509 lbs. making the aggregate weight of the two calves, 969 pounds.

I would also state that the cow did not eat grain of any kind, nor any thing but hay and grass after the calves were put with her, with the exception of a few pumpkins a short time before the calves were taken from her. They are a kind of cattle that mature at an early age, are often ready for the shambles at two years old, and as heavy as our other breeds are at three, with the same keeping; a circumstance which we think of no small consequence to the farmer; for if he can prepare his cattle for market one year sooner by having a different breed, is it not certainly wise that such breed should be chosen? Another advantage to many farmers, in this breed of cattle, is, that they will subsist on coarse fodder, and look well, where, in fact, others would die.

As to their milking qualities, we are aware that they do not produce so great a quantity as others, but are perfectly satisfied that it is more than made up by the superior quality, as tested by the lactometer, and other means. We have in our possession a full-blood North Devon cow, that is now 16 years old, a descendant of the highly esteemed herd of Mr. Patterson, of Baltimore, and which, when well fatted, would not weigh over 600 lbs., that we will venture any reasonable sum can be made to yield 250 lbs. of butter in one year, and have a calf in the time.

Our practice is to let our Devon heifers have calves at two years old, believing that they are as suitable for breeding at this age as most other breeds are at three, but should be well kept.

I do not eulogise this breed for the sake of personal gain, by disposing of stock at a high rate for breeding, as we have none, nor do we expect to have any for this purpose. We dispose of them to the drovers or butchers, at an early age. But our object is to see them widely disseminated through the country, and it is our candid opinion that there is no one breed which comprises so many valuable qualities. I would recommend to all those farmers who do not feel sufficiently able to purchase an entire stock for breeding, to select a few of their best cows, and cross with a Devon bull, and by thus continuing, in a few years will have a fine stock, with nearly all the beautiful characteristics of this profitable breed of cattle.

But how often is it the case that when some farmer has been to the expense of purchasing a superior bull, many of his neighbors will use an inferior animal, because it comes a few cents cheaper. Such men seldom have good stock, and never have an agricultural paper, unless it is a *borrowed* one. To such I would say, abandon this penurious principle, raise good stock, and take at least one agricultural paper. This is one part of the way to become "wealthy and wise."

Unadilla, N. Y., Jan. 27, 1846. S. G. Cone.

KEEPING FARM ACCOUNTS.

Luther Tucker, Esq.—Your correspondent, E. V. W. Dox, in the January number, p. 20, in giving "an outline of the way in which he keeps his farm accounts," has adopted a very common, and I think, an erroneous practice. He makes no charge for *team* work, in drawing manure or plowing. I see no reason why each number or lot should not be charged every item, as particularly as he would if he were plowing, drawing, or *furnishing* manure for his neighbor. I have noticed several reports of Farm Viewing Committees, and I see that they have pursued a similar course. They make the farm debtor to labor by man and team, seeds, &c., leaving out the manure. And credit it with *all* the produce, including work done off the farm, and then add from one to five per cent. for improvements. If they give the farm credit for 200 bushels of corn and improvements, why not charge it with the manure, which is quite an item in making the corn and improvements.

The course that I have pursued is the same, in numbering each lot, as E. V. W. Dox recommends. But I charge on one page of my Farm Book *all* the labor by man or team, *all* the manure, seeds, ashes, plaster, &c., to each number or lot, and on the opposite page give credit for *all* that it produces. The first of January I strike the balance. In this way I feel that I am doing no more than justice to each lot to add the improvement.

Berlin, Ct., Feb. 21, 1846. F. Roys.

APROPOS OF FARMERS.

I know a farmer who has but fifteen acres of land, off of which he supports his family—he continues to get 40 bushels wheat from an acre, and from 50 to 70 bushels of Indian corn, besides corn-fodder in abundance; instead of impoverishing his land by these heavy crops, such is his economy in saving, making, and applying his manures, that his farm grows richer. This farmer applies his knowledge of figures to his own calling. He says he cannot afford to grow half a crop, as the deterioration in fences, and the interest of money on the land is the same, crop or a half-crop. It is needless to say that this man takes two agricultural papers.

I know another farmer who has 78 acres of land, a fine calcareous clay loam, ameliorated by quartz and limestone pebbles, with a sprinkling of small boulders. He barely subsists his family, in a very *primitive* way, on the avails of his 78 acres. His corn-field is plowed, or rather half plowed, late in the spring, the weeds run a race with the late planted corn, until late in June, when the hoe and the plow give the stunted plants the end of the race. Now comes a drouth, the already enfeebled plants have no organic power to make the extra heat available; hence they are pinched by that very influence which gives fruition to the well-tended and early-planted field. But the drouth has at least served this man with an excuse for his short crop of Indian corn; thus saving his pride at the expense of his pocket. His wheat fallow is a little better managed than his corn-field, but his crop is always foul, sometimes short, and the grains are generally shrunken. To bring the year about without running into debt, this man pinches his family in the ordinary comforts of civilization; go to his house in a winter's day, ten to one he is asleep on his bed, or sitting cosily by the fire. Ask him to subscribe for an agricultural paper, and he is no longer cosy; all the Goth and Vandal in him is aroused. "I want no book to teach me how to farm. Look at my neighbor Progress, he is a book farmer. What use are his Durhams, and Berkshires, and all his big crops? He spends it all; it only makes his family proud; how mad it makes me to see his children sent by here every day to the village school." I do not retort upon this man the fact, that his district school cannot be respectably sustained, because the district contains too many such men as himself. I let him alone in his glory. I assail no man, who, like the hedgehog, is armed at all points.

I know another farmer, a mild, quiet German, who seems instinctively to have that German love of the beautiful and true, which is only an acquired taste with us restless Americans. While we strain after the ultimate good, they quietly improve that which is within their reach. This man's farm gives an earnest of the industry and good sense of its proprietor. Not a thistle, not a brier, no alder bound fences; all is neat, clean, and arable. The house rather plain; if it displays no taste, neither is it like too many of our fine farm houses, —a caricature on all orders, and good taste to boot. The barn is large, well ventilated, with painted blinds; the fences permanent and strong; what is lacking about these premises in ornament, is amply made up in neatness, and the appearance of positive comfort. This man modestly says, "*Ich can night guth English lezen.*" Still he takes the papers, and the well thumbed leaves of his last year's Cultivator, show that its contents have been understandingly read by him.

I know another farmer, a gentleman, a scholar, and a christian, so far as the fashionable modification of christianity will admit. He complains that he cannot farm by book, because his hired men object to the drudgery of the prescribed preparations. He speaks

twi e to his horses, where he condescends to speak once to his men. Yet, strange to say, he boasts of the cleverness of his horses, while he complains of the intractability of his men!!

I know yet another farmer, a book farmer if you please, a new beginner, but an enthusiast in his calling. He soon found that he could do nothing by way of improvement, without awakening in the mind of his head man, or factotum, an enthusiasm akin to his own. This man at first demurred to hauling swamp muck into the barn yard, lest it should spoil the manure. Now he has become an ardent student in vegetable economy, and in the philosophy of vegetable growth and nutrition, as it is taught in the agricultural papers of the day. Here is at least one laboring man, exalted from the character of a mercenary drudge, to be a respectable co-worker with the chemist in his laboratory, and on a grander scale. S. W.

Waterloo, Feb. 7, 1846.

REPORT ON FIELD CROPS,

By the Committee of the Addison Co. Ag. Society, Vt.

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LUTHER TUCKER, Esq.—Sir: I send you a concise report of the Committee on Crops for this county, made at our annual meeting, Jan. 28, 1846. It is proper to remark that the drouth has been more severe in this county than was ever known in any previous year. Crops requiring a deep root have come in very light, at best, and many have entirely failed. It is estimated that the yield of hay is about two-thirds of an average crop. Corn, not more than half. Potatoes, half, with the exception of some few instances where the soil was more favorable in a dry year. Peas and buckwheat, one third. All the turnep crops have failed entirely, or so much so that no claims for premiums have been presented.

Wheat, both winter and spring varieties, and oats, have endured the drouth better than any other, especially the Black Sea, which is a spring variety and very hardy. This wheat is a more sure crop with us than any other, and will do well on a great variety of different locations and soils without rust.

Claims presented for Society's premium marked with a star, were not received in season to entitle them to the same, according to the bye-laws.

Winter Wheat, one acre.

1. Rev. Dana Lamb, Bridport, 53¼ bushels, $6.
2. Jonas Hemingway, Bridport, 33½ bushels—$3.

*Alanson Pendleton, Whiting, 55 bushels.

Average product of three acres, 45⅓ bushels.

Spring Wheat, one acre.

1. Allen Smith, Addison, 51½ bushels—$8.
2. Stephen Holland, Panton, 33 bu. 16 lbs.—$5
3. Jonas Hemingway, 33 bu.—$3.

Dr. Wm. Bass, Middlebury, 31¼ bu.

*A. Smith, Addison, 50½ bu.

Average of the five acres, 40 bushels.

Indian Corn, one acre.

1. Jonas Hemingway, 98 bu —$8.
2. John Grovner, Bridport, 87 bu.—$6.
3. Geo. Spencer, Panton, 62½ bu.—$4.

*Solomon Allen, Panton, 87½ bu.

Average of the four acres, 84 bu.

Oats, two acres.

1. Reuben Sampson, Cornwall, 162 bu.—$4.
2. Charles Howe, Bridport, 131 bu.—$2.

Average of the four acres, 73 bu.

Peas—one acre.

1. John Grovner, 33¾ bu.—$3.
2. Harris Bingham, Cornwall, 26½ bu.—$1.

*Moses Hamilton, Bridport, 36 bu.

Average of the three acres, 32 bu.

Beans—half an acre.

1. George Spener, 18½ bu. $1, gratuity.

Potatoes—one acre.

1. James T. Lane, Cornwall, 385 bu.—$6.
2. John Grovner, 275 bu.—$4.

* Harris Bingham, 370 bu.

* Oliver Russell, Shoreham.

Average, 343 bushels per acre.

Sugar Beets—quarter acre.

Rev. Dana Lamb, at the rate of 25 ¾ tons per acre—gratuity, $1.

Carrots, quarter of an acre.

1. Job Lane, Cornwall, 415 bu.—$3.
2. Q. C. Rich, Shoreham, 283 bu.—$2.

Average per acre, 1396 bu.

Mr. Lamb raises winter wheat after corn and potatoes; sows in September three bushels of seed to the acre. Thinks thick sowing on good ground prevents lateral shoots from springing up, which do not often fill well, and prevents the main stalks from filling as well as they would if the whole ripened off at the same time. Lateral stalks are later in their growth, and do not ripen as early as the main ones. Mr. L. thinks his crop here reported has exhibited abundant proof of his views as here expressed; inasmuch as a part of his field was so dry at the time he sowed it that half the seed perished, and never came up. Here the lateral shoots sprung up, and ripened off several days later than the main branches; whereupon it was found that the yield upon this part of the field was much less than it was where all the heads grew on main stalks.

Remarks by the Committee.—Mr. Lamb has here thrown out some valuable hints, and the committee cheerfully recommends experiments directed to this point. It is believed that lateral stalks in wheat do not usually fill with grain as well as the main stalk, on account of the pollen being shed from the latter before the former are forward enough to receive the best influence from the farina or pollen which is scattered upon the heads and lost upon the laterals of immature growth by those of the main stalk, so as to produce imperfect fertilization in both. It is probably so with all kinds of grain whose blossoms do not yield a sufficient quantity of honey to attract the notice of the honey-bee, and other insects, lovers of honey, so as to transmit the pollen on their legs from the male to the female blossoms, and thus produce pregnancy. It is a well known fact, that wheat standing very thin and scattered, though the heads are large and long, never fills well. Lateral stalks in all kinds of grain where the wind is the only agent to transmit and mingle the pollen, are more liable to fail in perfecting seed; but where honey is yielded in abundance, as in buckwheat, Lateral branches yield well when the season is favorable. So with fruit trees and shrubs. The honey-bee, wasp, and other insects, (lovers of honey,) being attracted by the sweet nectar, perhaps inadvertantly, though providentially, transmit the pollen on their legs and bodies from the male to the female blossoms, thus supplying a deficiency in nature's department, when the wind stands too long in one direction. It is believed this doctrine is well established among the growers of vegetables and fruits in green houses, where the wind and insects are excluded. It is found even, that there are some shrubs that never can yield fruit without the agency of insects, for instance the barberry. The blossom is so peculiarly constructed that the wind has no efficiency, hence the agency of insects as the only means by which the necessary stimulous can be conveyed to the base of the filiament, so as to produce fructification, and ensure fruit.

Allen Smith, Esq., raises spring wheat after corn, potatoes, or oats; plows in the fall; sows one and a half bushels of seed to the acre in the spring, without manure, and harrows well. Soil, black muck, clay subsoil.

The committee regret that the claimants for premiums on corn are not more definite in their specifications. Thick planting answers only on strong land, rows north and south, wide enough for horse and cultivator to pass, and take in the sun. This appears to be the practice of Messrs Hemingway, Allen, Pendleton, Grovner and Spencer. Dr. Bass, and others, at the same time, plant as near the other way as the strength of the land will warrant, and cut up before frost, and stook.

Mr. Harris Bingham raises potatoes after wheat; manures lightly with coarse straw dung from the barn-yard; plows in the spring, plants early, hoes twice; uses a compost made of equal parts of plaster, lime, house-ashes, and salt; applies a table spoonful of the compost on each hill at first hoeing. This compost, he says, invigorates and strengthens the stalk, aids it in elaborating the sap, which greatly facilitates the exhalation of the ammonia caused by fermentation in the hill, and prevents rot.

By Committee. It is believed that this is a valuable experiment. We have tried the same the past season with perfect success, with the addition of sowing one and a half bushels of salt to the acre, broadcast over the field when the weather came in hot about the 20th of July. Salt is cooling to the soil, and stimulating to the plants, and this gives health and soundness to the tuber. Moreover, it is believed, so far as this course has been practiced, the potatoes keep better in the cellar.

Mr. Lamb recommends cultivating sugar beets for stock. Cattle and sheep are exceedingly fond of them, and the saccharine matter they contain is proof of their richness. They are raised similarly to carrots, but more easily and profitably.

Mr. Q. C. Rich recommends subsoil plowing for carrots. He uses the common plow in the same furrow after the surface furrow is made. The committee are of the opinion that the subsoil plow is by far a better implement to do this service. The common plow brings too much of the subsoil on the surface. Not so with the subsoil plow. It only loosens the subsoil so as to let down the roots where the land is moist. We have one of these plows, manufactured by D. Prouty & Co., Boston, Mass., which works admirably.

JOHN M. WEEKS, for Committee.

CULTURE OF FLAX.

MR. TUCKER—In a crop of flax every part is valuable, and well directed labor will reap its reward. On the 25th of May, 1845, I sowed three pecks of seed upon an acre of land, which, the year previous was green-sward, and produced oats, wheat, and potatoes. The soil was gravelly loam. It was plowed in the fall, and dragged several times in the spring previous to sowing, to destroy the weeds. No manure was applied to it.

From the above ground I obtained fifteen bushels of clean seed, which sold for eight shillings per bushel, and 250 lbs. dressed flax, sold for $7\frac{1}{2}$ per hundred lbs. Footed up it will read as follows:—

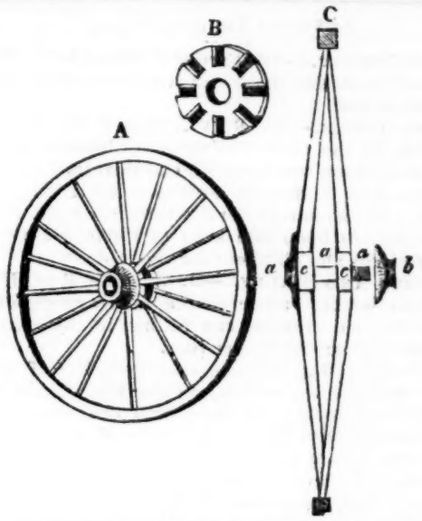
15 bushels seed, ...	$15.00
250 lbs. dressed flax,.....	18.75
	$33.75
Paid for dressing,.....	$6.25
Do. for extra labor, ...	2.00
	$8.25

Then I have left for my own labor and the use of my land, $25.50. Upon ordinary land, without manure or extra tillage, what grain crop would have yielded me more nett profit, with less expenditure of capital. Some get more bushels of seed, and many less. The greater the quantity of seed, as a general rule, the less will be that of flax.

The facilities for harvesting and dressing flax are much greater than in former times. It was once thought to require too much labor to make it profitable; but the existence of labor-saving machinery has induced many to go into it, because it is profitable, and the dread of work is counterbalanced by the large profits it yields.

Will flax grow and seed well year after year on the same land? Does it exhaust the soil more than other crops? What manure is best calculated to impart to the soil that principle which the flax has extracted? If some of your correspondents will answer the above questions, they will do the public a favor, and greatly oblige a farmer. B.

Leyden, N. Y., Feb. 25th, 1846.



SCRIPTURE'S CARRIAGE WHEEL.—(Fig. 28.)

DESCRIPTION OF THE DRAWING.—A is a perspective elevation ot the wheel entire—B, is a detached, or one-half part of the nave or hub, in which rests the ends of one-half of the spokes—C, is a cross section of the entire wheel, showing the position of the spokes and the separate parts of the hub—*a*, *a*, *a*, represent the pipe-box, passing through the two naves, or cheek pieces—*c*, *c*, having on the inside a connected flange of the same diameter as the naves, and covering the open end of the one next the vehicle, while at the other end a screw thread is cut to receive the screw flange, or front of the hub, represented by *b*, which, by means of a wrench, is screwed firmly upon the pipe box; by which means, the two naves being accurately fitted to the pipe, are made to approach each other, thereby causing the spokes to act as powerful levers, and producing the same effect that is sought to be obtained by resetting the tire of the ordinary wheel, but with the very important difference, that while the one is effected by a considerable expense of time and money, and with a positive injury to the wheel, the same result is brought about in the other by a few minutes application, and without incurring any expense or injuring the wheel.

The advantages claimed for this wheel, are, great economy, consisting in the durability of the hub, which, it is said, "will last for a generation;" and the facility with which it may be kept in order. Ordinary wheels become rim-bound in consequence of inadequate support in the hub; while by this method of constructing wheels, this difficulty is obviated at once, by applying the wrench to the hub and turning it up, more or less, as the case requires.

The inventor and manufacturer is E. S. SCRIPTURE, Stapleton, Staten Island, N. Y.

BURNING STRAW FOR MANURE.

MR. EDITOR—I have taken your paper some eight or nine years, but I do not recollect having seen anything about burning straw as manure for a summer-fallow. I have tried the experiment two or three times. The course I have pursued is as follows. I plow my ground the fore part of the season, harrow it down well, and then draw out the old straw that was stacked the year before, and which is quite dry. I spread it six or eight inches thick, as it lies loose on the ground, and it lays a month or six weeks. When I get ready to sow my wheat, I set fire so the straw. The effect produced is equal to a good coat of well-fermented manure. My wheat often turns out at the rate of 35 or 40 bushels per acre. I have tried burning the straw on sandy, gravelly, and clayey soils with good effect.

Now, I ask, what produces the effect described? Is it the ashes, and how do they operate?

E. H. PARSHALL.

Farmers Ville, Seneca Co. N. Y., Feb., 1846.

ANSWERS TO INQUIRIES.

SPRING WHEAT.—"A Farmer," (Stockholm, N. Y.) We should think the Black-Sea would suit the situation you mention best.

POLAND FOWLS.—W. R. W., (Clark co., O.) Mr. BATEHAM, of the Ohio Culivator, Columbus, can tell you whether these fowls can be had near that city.

POLAND AND DORKING FOWLS.—A. H. M., (Sandusky, O.) We should prefer the Dorking to the Poland, if we wished to keep one kind of fowls, "simply for furnishing eggs and chickens for the table."

DORKINGS AND MALAYS.—J. A., (Le Roy, N. Y.) These varieties are rather scarce in this neighborhood just now, but we presume can be had in the course of the season at about $2.50 per pair.

OATS.—A. M. D., (Greene co., Tenn.) "If oats be sown for years in succession, on the same ground, and pastured after heading, by hogs, will the crop and the ground improve?" We cannot tell—if the land was quite natural to oats, and no part of the crop was taken off except what the hogs would pick, it might improve, as there would be a good deal of straw left, and the hogs, while feeding, would leave considerable manure.

SOILS THAT "RUN" AND "BAKE."—A. M. D. "If you had soil that would run, like melted lead in a wet time, and bake as hard as a brick when dry, what would you do with it?" We confess this question is "too hard" for *us*, and must refer it to some one who can speak from experience with such a soil.

GALLOWAY CATTLE.—G. W. J., (Milton, N. C.) We know of none of this breed of cattle in the country. There are *polled* or hornless cattle, derived, probably, from different stocks, but they do not show the marks or points of the Galloway. Many of them appear to be a degenerate off-spring of the Suffolks—are sometimes good milkers, but of ugly shape, and are great consumers. The Galloways, are a hardy race, thrifty, and good for fattening, but have not latterly been bred for milk.

AGRICULTURAL CHEMISTRY.—S. B. (Orange county, N. Y.) Johnston's Lectures on the applications of Chemistry and Geology to Agriculture would be very suitable for you. The work may be had of Wiley & Putnam, New-York, in one volume, for $1.25, or in two volumes for $1.50.

RINGS FOR HOGS.—Common wire is the material generally used. It may be a sixteenth of an inch in diameter, or somewhat larger. The operation of putting it in the hog's snout is simple enough to those who have seen it, but is not so easily described in a small space. The closer the ring is to the snout, after it is done, the less likely it is to be torn out. A hole is made through the rim of the snout at the most central or pointed part, with an awl, and the wire run through and twisted at the ends so as to form the ring. We have seen a ring made of iron, flattened, something like a horse-shoe nail, with an eye in the head, through which the point was run and clinched. This answers well, and is not likely to tear out.

LIME LO KILL WIRE WORMS.—"WAYNE."—We have witnessed no experiments where a dressing of lime on the soil had resulted in the destruction of these insects. We should like to hear from any one who has proved the efficiency of lime for destroying worms of any kind.

CHARCOAL.—W. H. T. (Pittsfield, Mass.) No doubt the "fine charcoal made by the engines on our railroads," would be valuable for agricultural purposes; particularly as an obsorbent of urine and the liquids of stables and barn-yards.

TOBACCO.—T. A. (Walpole, N. H.) The information you ask for may be found on page 89 of the Cultivator for 1844.

CHEESE.—D. R. (Ellisburgh, N. Y.) In the Cultivator for 1844, pages 165, 166, you will find an excellent article in reference to the manufacture of the celebrated English Gloucestershire cheese. In the Cultivator for 1843, pages 114, 129, 147, you will find the details of the management of Mr. Fish, of Herkimer county, N. Y. The queries propounded to dairymen by a committee of the N. Y. State Ag. Society, will undoubtedly draw out new and useful facts.

HAY PRESS.—O. G. W.—Dedrick's press, described in the Cultivator for 1843, page 172, is well recommended. Price $100 to $120. Van Hosen's, described in Cultivator for 1842, page 66, appears to be a good article. The former is, or was made by L. Dedrick, Kinderhook, and the latter by by W. S. Jacks, Catskill.

PLASTER—LIME.—W. H. C. L. (Princess Anne C. H., Va.) Plaster is usually applied to corn by scattering it around the stalks when they are from four to six inches high. The best mode of using lime is thought to be, to spread it on the surface and harrow it in before sowing the seed.

CARROTS.—J. L. K. (Sing Sing.) We cannot account for the *want of taste* in your horses that they should refuse carrots. We have often fed carrots to horses, and never found any difficulty in inducing them to eat them. We suggest that the carrots be cut in pieces an inch square and mixed with oats, and fed to the horse at first when he is quite hungry. It is only necessary for the horse to fairly taste the carrots, to like them.

MACHINE FOR DRESSING AND BREAKING FLAX.—Information is wanted in regard to a machine for dressing flax and hemp, said to have been presented at the exhibition of the American Institute last fall by Mr. BILLINGS, of New Hampshire.

PEAT AND MARL.—W. A. (Yates county, N. Y.) The qualities of peat and marl vary so much, and operate so differently on various soils, that it is impossible to answer your question without knowing more of the circumstances. Your best course is to make trial of a small quantity of it at first in such a way as to demonstrate its value.

WOOD ASHES.—H. C. B. (New Lisbon, N. Y.) Ashes generally do best on rather light soils, and are particularly beneficial to grass, clover and grain crops. The difference in the value of leached and unleached ashes is not easily told. The statement of Mr. Crispell, published in our last volume, page 87, indicates that in some cases there is little or no difference. We have often been told that the Long Island farmers consider the leached as good as the unleached, provided they are not used for some time after being leached. Some suppose they attract valuable properties from the atmosphere after coming from the leach-tub. Is it so? and if any, what are the properties acquired? Will chemists tell?

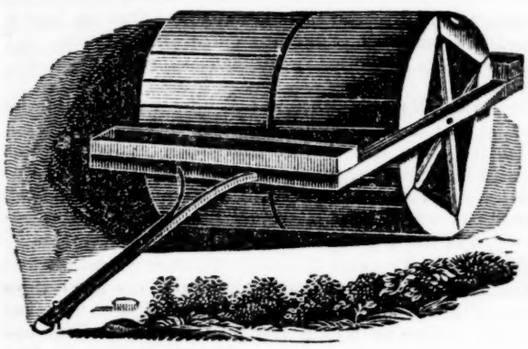
BONES FOR MANURE.—J. L. C. (Zanesville, O.) Bones are used largely in England and Scotland by being dissolved in sulphuric acid. Our correspondent, Mr. Norton, (see last vol., page 266,) states that this mode is by some preferred. Twelve pounds of acid, diluted with once or twice its bulk of water, is used to a bushel of bones. The bones, he says, may be placed on a heap of ashes, and the acid slowly poured over them. The outside of the bone will soon become soft, when they should be turned inside, and in a short time the whole will become soft and fine. From 25 to 30 bushels of bones per acre, is the quantity applied.

MADDER SEED.—We cannot tell where this seed may be procured.

GAME FOWLS.—R. M. (Geneva.) We must refer you to the various English treatises on poultry for the information you want—particularly Boswell, Dickson, and Main. These works could probably be had of Wiley & Putnam, N. Y.

MATERIALS FOR MANURE.

WM. TODD, of Utica, Md., writes—"I have long been of the opinion that every man who is the owner of an hundred acres of land, (especially if it requires improvement,) ought to keep a man with a yoke of oxen, collecting matters for manure into the barn-yard, for six months in the year. These matters should be leaves, sods (particularly when the grass is long,) from the fence rows, scrapings from the streets or roads, collections from ditches and ponds. He should use sand where the land to be improved is heavy clay, and clay where the land is sandy. No money expended on a farm will pay so well as that laid out in making compost in the barn-yard, where the contents of the stables are collected and made up in one great pile."



USE OF THE ROLLER—(Fig. 31.

THERE is scarcely a more useful implement of agriculture than the roller. The purposes effected by it are,—1st, the breaking of clods and lumps on grounds, preparatory to sowing or planting; 2d, pressing the earth, in some cases around the newly sown seeds, and at the same time giving more compactness to too light soils; 3d, smoothing the surface of grass grounds,—by which operation the stools of grass which may have been raised by the frost are pressed into the earth, the growth of the grass increased, and the surface better fitted for the scythe.

The first of these purposes, is one of great importance; yet we apprehend that but few, comparatively, of our farmers are in the habit of using a roller to effect the pulverization of the soil. Taken in a proper state of moisture, that is, when the lumps are just softened, but not so wet as to pack on being crushed,—the most cloddy field may be brought by the roller and harrow, into the finest tilth. It may be observed that the weight of the roller should be proportioned to the tenacity of the soil.

In the construction of the roller, it is now common to use plank, making a cylinder of three to four feet in diameter. One of this kind is represented in the above cut. The advantages of this plan are, that the implement is drawn with less force, and the pressure is applied in a more perpendicular direction. It has been objected, however, that less pressure is given to the soil by a roller of large diameter, than one of the same weight of smaller size, because the large one bears on a greater surface. This objection may be easily overcome by having a box attached to the frame, into which may be placed any additional weight required to make the roller effective. Another essential advantage of the large roller, is, that in turning, it does not move the surface of soil so much as a small one—thus avoiding the injury of tearing up the sward on grass-lands, or of working the seed into bunches and leaving bare spots, on land freshly laid down.

The roller is best made in two parts, or with a division in the middle, as shown in the cut, so that each part may revolve by itself. This much facilitates their turning, and obviates the liability of disturbing the surface of the ground. The length recommended for the roller by Low, and other British authors, is five feet; but we have known them to be made six feet in length; and when divided in the centre, as before mentioned, we think there is no objection to that length.

FARRIERY.

MR. EDITOR—A farmer of this town has given me the following receipt for curing wounds and running sores in horses. Take corrosive sublimate and red precipitate in equal proportions, powdered, and put them into a vial. Wind a little tow or a rag on the end of a stick, wet it and apply it to the wound, touching all parts with the mixture. If a running sore, it should be probed with the wad. He has never had occasion to make more than one application, and has never known it fail. He had a horse which had a swelling on the shoulder, supposed to have been caused by the harness while working on a long sweep horse-power. He had it opened and tried several remedies without success. He tried the above, and in three days the whole matter sloughed out, and it healed in a short time.

I have heard of a new cause of heaves in horses. One subject that died was opened, and on each side of the wind-pipe, where it joins the head, were formed two bags as large as walnuts, filled with pus. Where these lay near the throttle valve, the pipe appeared of an unnatural color. Every other part appeared healthy and sound. Afterwards another horse, which had become worthless on account of the heaves, was killed and opened, and found to be affected in the same way. Afterwards an experiment was tried on another horse, in which the bunches were found. Taking hold of the bunch with a pair of blacksmith's tongs, an iron was held at the under side, and a blow given with a hammer on the upper side. Since that the horse appears to be doing well. But I should think it would be better to open the skin and take out this bag. Farriers may know this disease by another name. B. W. R.

CAN WE TAME MORE OF THEM?

MR. EDITOR:—There is no doubt, I suppose, that all the water fowl that we now have in a domestic state, were obtained from the wild varieties of this or the other continent. They are valuable to us, and the question has often arisen in my mind, cannot more of them be domesticated? There are many species yet to be found in our waters, interesting not only for their valuable qualities for the table, but also on account of the beauty of their plumage, which can probably be domesticated if suitable pains were taken. Mr. Bement, in his work on Poultry, says, experiments are being made with the celebrated canvass back duck, and Dr. Dekay, in his report on the Ornithology of New-York, (a work which does honor both to the Dr. and to the state that employed him,) says that the beautiful wood-duck has been domesticated successfully.

Has the American Swan, (*Cygnus Americanus*,) been domesticated by any one in your state?

Dr. Dekay, in his report, p. 353, says—"In the uninhabitable regions of Hamilton and Herkimer counties in this state, this species, as I was informed by trustworthy hunters, remains during the whole year, where it must necessarily breed. The outlets of Paskunganeh, or Tupper's lake, was specified as a spot to which they were particularly attached." If this be true, it would seem that these birds are not so migratory in their habits as most of the aquatic fowls, and this trait would be favorable to domesticating them. Perhaps some of the people of these counties have already tried the experiment. If so, it would give your readers great pleasure to learn the fact. I think it would be a noble addition to the poultry-yard, as it is a large and showy bird. I may write to you on this subject again, and in the meantime would solicit information through your columns in regard to it. E. HOLMES.

Winthrop, (Me.,) Feb. 9, 1846.

NOTE.—We have noticed at the Bowling Green, in New-York, several kinds of our wild water-fowl, among which are the Wood Duck, (*Anas sponsa,*) spoken of by Dr. Holmes, the large Dusky, or Black Duck, (*Anas obscura,*) and the Brant Goose, (*Anser bernicla.*) They all appear to be well domesticated, but whether they breed or not, we do not know. We have been told that they and other kinds are domesticated, and are bred on Long Island. The residence of Dr. Dekay is at Oyster Bay, L. I., and we presume he could furnish information as to the breeders of these birds. Respecting the American Swan, we have heard of its being domesticated in several instances. A man in Delaware county, Ohio, succeeded, as we were told, in breeding them for several years. T. H. HYATT, Esq., of Rochester, informs us that a man in Niagara county, in this state, now has them, but has not yet been able to induce them to breed. We have known no instance in

which the canvass-back duck has been tamed, though we heard that a man in the vicinity of New-Orleans had them several years ago. The wood-duck is certainly a most beautiful bird, and we presume is not difficult to domesticate, as we have frequently heard of its being made an inmate of the poultry-yard. The brant goose is also one of the most elegant of all water fowls. In its color, it is somewhat similar to the wild goose, (*Anas canadensis,*) but is more handsome in its shape and general appearance. It is, probably, the least in size of any of the goose family.

FACTS AND OPINIONS,

Condensed from various Exchange Papers.

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FORCING VEGETABLES BY GALVANISM.—The Prairie Farmer, (Chicago,) gives the result of his experiments, made by burying a copper plate of about five square feet at one end of his garden, and a zinc one of equal size at the other, connected by copper wires on stakes above ground. Peas, cabbages, beets, carrots, pinks, tomatoes, potatoes, and parsneps, grew between. "Thrice a day they were visited, and various were the squintings, measurings, and comparisons, to make it appear that the galvanized vegetables were outstripping their fellows"—but they showed a most provoking indifference to the experimenter's wishes. The only exception was a row of beets, far larger than the rest—but they happened to be of a different and larger sort, in a thin outside row. The statement winds up with the opinion that a row of toads, at each end of the garden, winking at each other, would be as effectual.

INDIAN CORN IN SOUTHERN EUROPE.—Henry Colman thinks, that should Indian corn be admitted into British ports free of duty, the supplies of the article from the shores of the Meditterranean, would nearly preclude the competition of the United States.

SOILING CATTLE IN SUMMER.—Edwin M. Stone, in his Essex Address, says, that an Essex county farmer, by giving his cows freshly cut feed, during a severe drouth and hot weather the past summer, kept the milk of his cows undiminished, and found ample remuneration for the trouble in the extra receipts of his dairy.

CARROTS FOR HOGS.—The great value of carrots for horses and cows, and their superiority for animals to any other root with which we are acquainted, we have sufficiently proved by exprience. A correspondent of the New-England Farmer, however, gives the following statement of their slight value for pigs. "I have no faith in carrots as fatteners of hogs. I have steamed up cartloads upon cartloads, this fall, and fed them to a dozen and a half of hogs and shoats, and it's a man's work to keep them from squeeling."

PIES OF SUGAR BEETS, may be made by grating the beets, and then using them as pumpkins, adding rather more salt and spice. We have eaten pies, which we could not have distinguished from good squash pies, made in this way from carrots. Pumpkin pies made by grating instead of stewing, are quickly made, baking them a little longer, and have more flavor than usual.

SUBSOIL PLOWING.—J. M. Weeks, in the Boston Cultivator, says that in plowing loam, about seven inches deep for the surface soil, and and eight inches deeper for subsoil, the latter was nearly one-fourth easier for the team than the surface plowing. But in clay, where the surface was loosened six inches, and the subsoil eight inches, the latter required nearly one-fourth more strength of team.

LIEBIG ON POTATO ROT.—This distinguished chemist states that he has found this year a considerable quantity of vegetable *casein* (cheese) precipitable by acids, not observed in his previous researches. He thinks, from the influence of the weather, or from atmospheric causes, a part of the vegetable albumen, which prevails in the potato, has become converted into vegetable casein; and from the great instability of the latter substance, results the facility with which potatoes containing it undergo putrefaction. He can discover no *solanin* in the diseased tubers, and states that an injury to health from a use of them is out of the question, and that no where in Germany has such an effect been observed.

CUTTING WHEAT EARLY.—A correspondent of the London Agricultural Gazette states, that wheat which he cut fully ten days before the usual time, and was laughed at by his neighbors for it at the time, was decidedly superior in quality to that which had been reaped five or six days later. His whole crop was superior, and much prized by bakers and corn dealers.

DEPTH OF TURNEP ROOTS.—Another correspondent of the same paper, says that he has found the fine fibrous roots of the Swedish Turnep (Ruta-baga) five feet below the surface on which the plant was growing, and all around it, a less depth, to a distance of three or four feet. The experiments of Tull, in which he showed the length of turnep roots to be several feet, by the influence of loosened soil upon their growth and size, are familiar to many readers of the Cultivator.

GIGANTIC TREE.—A correspondent of the London Gardener's Chronicle, states that there was a tree growing in Penang, Straits of Malacca, much visited by strangers, which measured 33 feet round, (about 11 feet in diameter,) six feet above the ground; and at the height of 110 feet, where it threw out its first branches, it measured twenty-seven feet round, (or about 9 feet in diameter.) The surrounding forests were cleared, and the wind prostrated it. It was then measured, and estimated to contain 155 loads of timber. From some of the properties described, it appears to be some species of fig, probably allied to the India rubber.

POTATOES FOR THE IRISH.—Professor Lindley estimates that the people of Ireland consume 12,607,500,000 pounds of potatoes per annum, for producing which 804,000 English acres must be under potato cultivation. And that to plant next spring as much land as seems necessary to feed the Irish population, (without exporting as usual,) would consume for seed above 800,000 tons.

CRANBERRIES.—Gen. Chandler stated at a late meeting of the New-York Farmer's Club, that Sullivan Bates, of Bellingham, Mass., raises cranberries in great abundance, by transplanting them from low grounds to high. He plants them in drills, twenty inches apart, and seven inches in the drill. His success was complete. He gathered from one acre about *four hundred bushels* of cranberries in one season. The soil must be such as will not bake. Other gentlemen present corroborated the superiority of upland planting.

SOILING.—T. E. Wallace, in the London Ag. Gazette, says that his cows diminished in milk nearly one-half, by being *stabled* in midsummer, and fed entirely on cut grass. He concludes that however excellent soiling may be, close stabling is highly improper in warm weather. On turning his cows out, they regained their milk.

RATA TREE IN NEW ZEALAND.—This is at first a parasite, which winds round and encircles large trees, and destroys them; its numerous coils joining and forming a hollow trunk, leaving the victim to rot inside. When full grown it is the monarch of the New Zealand forest, Its form is gnarled and contorted. It is of the myrtle tribe, and bears bright crimson blossoms in such abundance that the whole tree is in a glow; and being abundantly intermingled through the forest, presents a magnificently variegated appearance.

IMPROPER USE OF GUANO.—Another correspondent in the same paper, states that the use of guano has been known to the Jesuits of Upper California, ever since the middle of the last century; and further relates, that after the use of it for several years, the soil becomes rapidly exhausted; so that while under the influence of guano, the crop was in some cases no less than 120 bushels per acre, it afterwards became literally barren. The fertility is partially restored by irrigation, which conveys a deposit to the soil.

ALEX. LEEDS, St. Joseph's, Mich., says—"The same quantity *saleratus*, in place of *salt-petre*, is far preferable in curing meats, especially beef.

CULTURE OF INDIAN CORN.

THE circumstances most favorable to Indian corn, are a rich, deep, and light soil, with a hot and moderately moist atmosphere.

Keeping in view the principles most congenial to the habits of the plant, we should prefer commencing the cultivation with the soil in a grass or clover sod. The disposition of the manure, if any is used, will next demand attention. The quantity proper to be applied depends on many circumstances—such as the condition of the soil, the whole quantity at the disposal of the farmer, and the requirements of his other crops. The plant will bear a large quantity, if it is intimately mixed with the soil, though the yield is no doubt sometimes lessened in a dry season from too much unfermented manure being used. While the weather is favorable, it induces a large growth of stalk, by which a proportionate degree of moisture is required; but the encouraging stimulus may be counteracted at another part of the season by the tendency of the manure to make the soil more dry than it otherwise would have been. Perhaps as a general rule, it would not be advisable to apply over 30 two-horse loads of long barn-yard manure in one season.

We should prefer that a part of the manure used should be pretty well rotted, and that the other portion should be in a fresher state. The latter we should spread on the sward before plowing, and turn it in with rather a shallow furrow—not exceeding the depth of four inches. The object being to keep the manure near the surface, that it may be the more readily acted on and rendered soluble by air and heat, we should merely cover it sufficiently to prevent loss by exhalation. If the soil should be so compact as to render expedient a deeper loosening than would be made by the common plow, we should use the subsoil-plow, running it in the furrow directly after the other. By using two teams, one following the other, the whole work may be carried along together without any interruption, and in many cases with not more than double the expense of plowing, in the usual mode. The particular advantages of subsoil plowing, it is not intended to discuss here, though it may be remarked that no doubt is entertained of its general utility.

The *time of plowing* must of course depend on the convenience of the farmer. If he has much to do, it is obvious that he cannot plow *all* his land at one time; but we believe experience has established the fact, that the best success has generally been obtained from plowing performed as near as practicable to the time of planting. This result is reasonably explained: the soil is kept in a more friable state through the season; the furrows not being beaten down and run together by heavy rains, as is often the case when the plowing is done earlier. The rotting of the sward takes place most readily when plowed after the grass has considerably started; the sap-vessels being then filled with juices which promote decomposition; and if the seed is planted at the time of plowing, the crop converts to its use, without waste, the gaseous food as fast as it is evolved.

We are aware that certain advantages are claimed for fall and winter plowing; the first of which may be said to be the greater leisure of the farmer at that season of the year; second, the destruction of insects; and third, the benefit of the soil by the action of frost. The first of these positions is undoubtedly correct, and the *convenience* of doing the work at this season, may go far towards counterbalancing some of the disadvantages, and in some cases may justify the practice. How much soundness there may be in the second position, we are not prepared to say. That insects are destroyed from being disturbed by the plow late in the fall or during the winter months, is probable; though it is thought that further and more accurate experiments than have yet been made are required to establish the advantage of fall plowing in this particular. As to the beneficial action of frost, it is admitted that soils of too adhesive a nature, may be so managed that they are thus rendered more open and friable; but to secure this benefit it is necessary to throw them into narrow ridges in such a manner that the water will be quickly thrown off; for it is only by the ground being frozen and thawed while comparatively dry and exposed to the air, that the pulverulent action of the frost takes plaee. If the surface is left level, the particles of the soil are soon run together by rains; and thus, in sward ground, the subversion of the sod by fall plowing, only produces a greater degree of adhesiveness—increasing the very defect it was designed to remedy. Thus it appears that it is only *too heavy* soils, that can, under any management, be benefitted by fall plowing.

Mode of plowing.—For very light and loose soils, almost any sort of plow or any mode of plowing may answer the purpose; but for compact and tenacious land, much depends on the implement and the manner in which this operation is performed. Several practices prevail in different parts of the country, which seem liable to objections. For instance, fields are often plowed by beginning on the outside and continuing to go round the lot till it is finished. The objections to this mode are several. It occasions inequalities in the surface of the ground, by the manner in which that portion moved by the plow is disposed of—gathering the richer portions into particular places, and making the soil thinner in other spots. Fields have been seen which had been so long plowed in this way that the ground near the fence or on the margin of the field, was raised several feet higher than the general level. In this mode of plowing also, the teams are obliged, in turning at the end of the furrows, to tread more or less on the plowed ground, so that there is a hard beaten strip of eight or ten feet in width on those portions of the lot where the furrows made in one direction end, and others commence. The soil also becomes thin at these places—the action of a plow at the beginning of a furrow, always throwing the earth a little forward; so that by the tread of the team and the gradual removal of the soil, these spots become at length comparatively barren.

A better mode of plowing is to commence by striking a furrow about a rod from the fence, on all sides of the lot, and then plow the field in "lands,"—completing the work by plowing the outside strip; in doing which the furrows should be commenced next the plowed portion—the team passing round the lot and turning to the right till the work is done.

Other defects in plowing are, leaving portions of the soil between the furrows uncut and undisturbed, and also turning too wide furrows. The bad consequences of these practices are not so evident nor indeed so great on light sandy or gravelly land; but it will be admitted that the *best* plowing is that which approaches nearest to spade husbandry, and this can only be gained by an intimate division of the soil. Without laying down any specific rule for the width of furrows, it may be observed, that the heavier and more compact the soil, the finer it should be cut by the plow, in order to fully secure the object designed. It is the practice of some of the most judicious farmers, not to plow a wider furrow than ten inches, on soils of medium stiffness.

In plowing *sward* especially, the circumstances which favor decomposition, should be duly regarded. Science teaches, and practice and observation prove, that the action of heat and air is essential in effecting changes of animal and vegetable bodies. This important principle should be kept constantly in mind, and the inferences deducible from it, should direct to a proper performance of the work under consideration. The furrows should be laid lightly—being so disposed by the plow as to admit the access of air to the under side. If they are very wide, or are turned over too "dead," as it is sometimes expressed, they will press more closely on the subsoil, and the decomposition will go on but slowly—indeed in wet and cold lands it will scarcely take place at all.

Another advantage resulting from leaving the furrows as here mentioned, is the opportunity afforded for the escape of surplus water. This is in many cases of great consequence, for though a certain degree of moisture is favorable to decomposition, and to vegetable growth, yet is well known that an excess is injurious.

Considerable controversy has at various times been carried on in regard to the relative advantages of "flat" and "angular" furrows. The objections to flat furrows, seem however, to be much less in cases where the subsoil plow is used, and on porous soils, than under other circumstances. In the management of grass-land, it is the practice in some sections to plow them up when the grass declines in quantity, and sow the inverted sward immediately with grass-seed. For this object the ground must be rendered sufficiently smooth to give a good bottom for the scythe, and for this it is necessary that the furrows should be considerably flat. The advocates of both these modes of plowing, however, generally agree in regard to one important requisite; that is the complete and effectual covering of all vegetation. If the grass is allowed to project between the furrows, it will grow, and not only prevent the sward from rotting, but will obstruct cultivation and injure the crop. There are, it is true, comparatively but few plows that are capable of performing, perfectly, the operation required; nevertheless there are some such, and the farmer would greatly promote his interest by using them.

Management after plowing.—In a preceding portion of this article, it was mentioned, that for the corn crop, a portion of the manure would be preferred in a rotten state. In this latitude, to which special allusion was made in this particular, the season of vegetation is at best but just long enough to fully mature the crop. It becomes then a matter of the first consideration to induce a rapid growth of the plant from the first start, in order that its maturity may be rendered certain. This, in fact, is the grand point, for if it is not gained, the labors of cultivation are performed in vain. The vegetable nutriment of manures is not available till decomposition commences; hence green or long manures cannot afford the plant in its early stages, the support which it requires; sustenance must therefore be provided from which it can be fed and nourished immediately. The rotted manure supplies this requisite. It should be spread on the surface after plowing, and harrowed in with a light sharp harrow. If the quantity applied is small, the benefit would probably be greater by depositing it in the row or hill. By using the rotted manure on the surface and covering the other, as mentioned, the whole food of the crop is so disposed as to afford a regular supply in the ratio required by the increasing growth. At first the plant feeds on the old manure, and while that is becoming exhausted, the long manure and the vegetable matter of the sod are brought to a soluble state, and as the roots are extended an abundant pabulum of nourishment is obtained. The *exclusive* use of thoroughly rotted manure for Indian corn is not advisable—its action is not sufficiently lasting—it will throw the crop forward early, and make plenty of stalk, but is liable to become exhausted before the grain is formed. This is often the case with poudrette—it has in many cases proved insufficient to make a crop of corn without other manures, such as barnyard dung, or a decomposing sod. Used in connexion with these substances, its benefit, when properly prepared, is undoubted.

Mode of planting.—The distance between the rows or hills, number of stalks to the hill, &c., must be determined principally by the character of the variety cultivated. The different kinds require space according to the size and height to which they are inclined to grow. The smaller the kind, the closer may be the planting. If planted thickly, considerable advantage will be gained by allowing the greatest space to rows running north and south, as freer access to the light and heat of the sun is thus afforded. In drill planting, the medium sized varieties usually cultivated in this latitude, (42½ degrees,) require a space of three feet between the rows, and with this space one kernel may be allowed to every foot in the row, for a permanent stand. If land is very weedy, there is an advantage in planting so that the corn can be worked both ways; but to render this convenient, a less space than two and a half feet the narrowest way, would not be advisable, and three stalks might be allowed to a hill.

In the *selection of varieties* reference should be had to quality of soil as well to the nature of the climate. A variety inclined to produce large stalks should by no means be put on thin land; for the food of the crop might be so much exhausted in producing the stalk that the ear might fail for want of nourishment. A larger variety, however, than it would be wise to plant, on thin land, may be profitably placed on that which is rich; but whether the kind chosen be large or small, or calculated for rich or poor soil, it should be regarded as important that it have as little stalk and cob as possible in proportion to the size of the ear and the quantity of corn. A small cob, especially at the *butt*, is of much consequence. In this latitude, as before remarked, the ripening of corn is rather precarious, and a difference of only a few days in the maturing or drying of the grain, may seriously affect the value of the crop. Every one may have observed that the ears with a large cob and large butt, retain moisture and remain in a green state longer than those of an opposite description. This retention of moisture renders the corn liable to injury by moulding in the crib, or when standing in shocks, and also by the cob being frozen while in this state. The latter effect may be frequently noticed; on those ears which have been frozen while the cob was filled with sap or juice, the cob and the "chit" of the corn will be found black, and the kernel has in many cases lost its germinating power.

To provide against contingences, (destruction by worms, birds, &c.,) it is proper to plant an extra number of kernels. After the corn has attained the height of six or eight inches and is out of danger, the supernumeraries may be pulled up, leaving only the desired number of stalks.

The *proper depth of covering* in planting corn, depends on the nature and dryness of the soils. The depth of an inch on some soils would be equal to several inches on others. A deeper covering than is actually necessary to produce healthy germination, is prejudicial to the growth of the plant, and considering all circumstances, there are but few cases where it would be advisable to cover corn more than two inches, and in very moist soils, a covering of only an inch would be preferred.

If the ground has been well prepared, and is free from stones, the corn may be well planted with a machine. Lewis' "Seed Planter" will perform well in such cases, and make a great saving of labor.

Time of planting.—The condition of the soil as to warmth and moisture, and the general forwardness of vegetation, must regulate the time of planting. From the variation of the seasons it is obvious that no particular *day* can be fixed on for this work. The rule said to have been followed by the Indians,—from whom we first obtained and learned the uses of this valuable esculent——was to plant when the leaves of the white oak had so far advanced as to show the form of a crow's foot. The ground has then acquired a good degree of warmth, germination is quick, and the growth rapid.

Culture of the crop while growing. The first object should be to keep the ground light, and the crop clean from weeds. On light soils, the harrow and cultivator may accomplish this without much aid from the hoe; but operations must be commenced with one of these implements, (the harrow is perhaps preferable at first,) as soon as the corn appears above ground; and so frequently should the work be repeated as to allow no time for the weeds to start.

On soils which have a tendency to become too compact, tools must be used which will penetrate the ground to a considerable depth. It is the class of soils which bake under the action of the sun, that suffer most from drouth, and the crop can in no way be so well protected against injury from this cause, as by frequent stirring and loosening the soil, by which the tendency to become too solid is counteracted. An implement with teeth like a plow coulter, two or three in a frame, answers this purpose well. While the corn is small, it may be run very close to the stalks without injury, but as the size of the plant increases, and the roots extend, the implement must not run so near. In some sections, what

is called a shovel plow is used, and when properly made, it is an excellent tool. The wings of the share should not be too widely spread, as this throws the ground too much into ridges; it should be calculated to cut or stir the ground without moving it much to the right or left. A good plow of this kind loosens the soil much more effectively than a common plow, leaves it lighter, and not thrown into ridges. Besides the objection of too much ridging the ground, the common plow leaves the substratum even heavier than it was before, instead of making it loose and light.

For any ground on which it is proper to raise Indian corn, level cultivation is decidedly preferred. It exposes less surface to be dried by the sun and air, more readily receives and retains moisture, permits the extension of the roots over the whole soil by which the plant is better nourished, and better strengthened against the force of winds. When ground is thrown into sharp ridges, as is done by the plow, many of the horizontal roots are scorched by the sun, and are necessarily so short as to afford the plant but little support as braces.

In cultivating sward, the sod ought not to be turned up the first season. The tools mentioned will sufficiently loosen the soil without bringing the grass to the surface, and the gases evolved by decomposition are not wasted in the air, but are taken up by the growing crop.

In the early stages of the growth of the crop, the soil can hardly be tilled too much. To keep down the weeds, which should be the primary object, some of the implements of culture should be often passed through the soil, till the crop becomes so large as to obtain full possession of the ground.

Harvesting.—The fact is well established that the aggregate value of the corn-crop is greatest, when it is cut and properly cured in shock. The only objection to the practice is the difficulty sometimes experienced in drying. It sometimes happens that there is an unusual prevalence of wet weather immediately after cutting up the crop, which induces mouldiness in the grain and injures the fodder. Some varieties of corn are also cured with more difficulty in this way than others. This objection applies to those kinds in which the ears are produced close to the ground, and which have besides a large number of short suckers and leaves, that prevent the circulation of the air and hold the dampness.

Care should be taken that the shocks are not made too large, and that they are set as openly as possible at bottom. It may be observed, however, that with the tall varieties cultivated at the south and west, these precautions are hardly necessary. If the corn is rather green when cut, it is a good mode to make but a part of the shocks at a time, leaving a sufficient number of rows to make the shocks of the desired size; and when the first is sufficiently dried, the remainder is cut and added. The shocks should stand to dry for a few days, if the weather will permit, before they are bound. In binding, the band should be placed as near the top of the shock as practicable, both for the better shedding of rain and allowing the shock to remain more open to the air.

The fodder of corn when well cured in this manner, is an excellent article for feeding cows or other stock in winter. An acre of stout corn is considered equal to an acre of good grass, in the value it affords in stock-feeding, exclusive of the grain.

ARTESIAN WELLS.

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Mr. Tucker—Can you give us any information on the subject of Artesian wells? We have large tracts of land in our region of country which are destitute of running water, particularly in a dry season, which inconvenience I believe will at some future time be remedied by bringing water to the surface of the ground by boring. In digging wells in this vicinity, after passing through the soil and a subsoil, usually of a clayey loam, we usually come to a bed of blue clay between ten and twenty feet from the surface in which is found more or less gravel, pebbles, and occasionally a small boulder of granular quartz or hornblende; this bed varies in thickness from ten to fifty feet, rarely less than about twenty. A bed of quick sand filled with water, is usually found after passing the blue clay, and in many instances the water rises several feet from the fountain found in the quick-sand, while in some it does not rise at all. In no instance have I heard of a rock stratum being discovered in digging. In many instances, after digging several feet in the blue clay, the experiment of boring down to the quick-sand has been tried with success, and in others it failed of obtaining a supply of water. Now if some one practically acquainted with the necessary implements and all the manipulations in prosecuting the work of boring for water, in a country the features of whose geological formation resemble ours, we shall be highly gratified to receive a *full report* from him.

The principal difficulty in the work, will, as I apprehend, be in passing through beds of quick-sand. I am full in the faith that water may, in most instances in this vicinity, be made to rise above the surface by boring not to exceed three hundred feet.

Yours, &c., C. Bryant.

Princeton, Bureau Co., Ill., Jan., 1846.

We should be pleased to receive information in relation to the subject of the above communication.—Ed.

SEED CORN.

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John S. Yeomans, Columbia, Ct., gives an account of of some experiments he has made in selecting seed-corn. He sums up the conclusions to which he arrives as follows:

"1. That there is a tendency in corn to degenerate—that a variety after having been planted for a series of years, is not likely to ear well or to fill out on the ear, though the stalk may be luxuriant.

"2d. That an early variety, taken from a higher latitude and cultivated here, will increase in the size of the ears, be more prolific in grain, with a less quantity of stalks."

Mr. Yeomans says his principal object in this communication "is to impress upon the minds of agriculturists, the importance of occasionally changing their seed corn." In reference to this, we remark that we should observe the same rule in changing "seed corn" that we would in changing the breed of any live stock—that is, if that which is better can be had, change and get it, but not otherwise. We would not however discourage a trial which need not involve much risk, in order to ascertain whether a real improvement would be made by adopting a change. That a variety of corn, or any plant, has actually "a tendency to degenerate" in consequence merely of being cultivated "for a series of years" in the same neighborhood or district, we cannot believe. It is true a variety of corn may be chosen which is not adapted to the soil and climate—it may be a larger variety than is proper for a thin soil, or it may require a longer season than belongs to the locality—nevertheless, if any portion of it should ripen, and a judicious selection be made for seed, each succeeding crop will be better and better fitted to the situation—it becomes acclimated. Instances are not wanting to show that every kind of grain or vegetable may be greatly improved by selecting from year to year the best specimens for seed. As to bringing corn from the north, we should decidedly prefer that, to taking it from the south.

GIVING AGRICULTURAL PAPERS.

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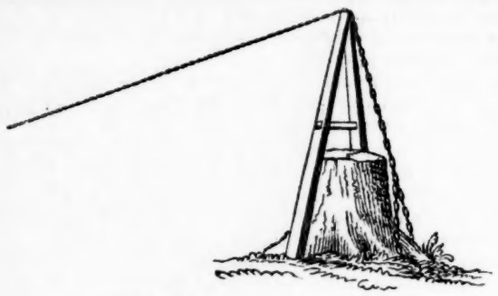
The Chittenden Agricultural Society (Vt.) has adopted the plan of giving each member of the society an agricultural paper. The president of this society, L. G. Bingham, Esq., writes in reference to this plan as follows:—"Our new plan of giving an agricultural paper to every subscriber to our society in this county, works admirably, and more than doubles the number of our members."



STUMP MACHINE.—(Fig. 31.)

L. TUCKER, ESQ.—The above cut represents a very cheap and efficient stump machine, in use here, which consists of two pieces of hard timber, six inches square by two feet in length, firmly fastened at the top, with a strong band of iron; and cross-piece in the middle, in the shape of a three cornered drag, which is to be set astride the stump, with a strong chain fastened to the top of the machine, and to a root on the back side of the stump from the cattle. A common sized 18 feet chain will answer to hitch the cattle with. Two yoke of cattle will pull almost any common stump that has been cut from three to five years. It is not to be supposed that it will pull every pine or oak stump that it may be hitched to, but it is believed to be the cheapest and best kind for clearing old fields of stumps to be found.

It would be well to have the lower ends as broad and flat as convenient, to keep it from sinking in the ground.

West Hill Creek, Pa., Feb. 3, 1846. G. N.

EXPERIMENTS, SUGGESTIONS, AND QUESTIONS

MR. EDITOR—It has been thought that the knowledge which goes to constitute good and bad farmers, may in different ways be compared to the materials—such as timbers, boards, shingles, nails, &c.,—with which convenient and inconvenient houses are constructed. Some farmers with much knowledge, are good farmers; while others, with much knowledge, are poor farmers, as they lack the ability to rightly apply their knowledge. Some houses, constructed of many materials, are convenient; while others, consisting of as many materials, poorly put together, are inconvenient. The comparison also holds good between farmers with little knowledge, and houses constructed of few materials. And, if in offering the following variety, some of your agricultural readers should be supplied with a needed timber, a board, or perchance a few shingles or nails, the time spent in furnishing them will not be spent in vain. Possibly some of the following observations may tend to prevent a timber or a board being placed in a wrong position, or assist in clinching a hinge or a nail.

In a former number of "The Cultivator," the idea has been advanced, that it is possible that substances hurtful to the growth of plants, may be taken up through their roots; and in another number salt is recommended to be applied to the roots of plum trees. To corroborate this first sentiment, and to prevent an overdose of salt being applied to fruit trees, the following case is stated as being well known to have happened in this place. A barrel containing brine was placed under a cherry tree, and either by leaking out or being spilt, a a part of the brine got down among the roots of the tree; and the consequence was, that the leaves withered some weeks before the usual time for leaves to wither, and the cherries were much smaller than usual, and so salt as not to be fit to be eaten.

The relative fitness of large and small potatoes for seed appears to be a subject of doubt with many farmers; and the same may be said with regard to whole potatoes, and those that are cut. This seems to be the case notwithstanding many experiments have been made to get at the truth of the subjeet. While the following experiment is stated with the hope that it may throw some light on a doubtful subject; it is also proper to observe, that in respect to the different modes of rearing potatoes, the statement that "circumstances alter cases," is very appropriately applied; especially, as some potatoes have more and larger tops than others; and as the tendency to grow large (whether the seed is large or small, cut or uncut,) is much stronger with some varieties, than it is with others.

In 1835, the eyes (cut small) from three bushels and twenty quarts of potatoes were planted as an experiment with one bushel thirteen quarts of whole ones. They were planted in drills in the following manner. First, three rows with eyes, then a row with whole ones, and so on. The eyes were planted much nearer each other than the whole ones. In planting, hoeing, and in digging the crop, it required full double the work for a row with eyes, that was required for a row with whole ones; and while the four rows planted with whole potatoes yielded fourteen bushels, the twelve rows planted with eyes, yielded twenty-two bushels. It is not distinctly recollected by the writer, as to what variety was used for seed; but he believes that with respect to size, and the number of stalks to each, they nearly resembled the flesh color.

From page 61 of the present volume of "the Cultivator," it appears "there is frequent complaint among farmers that their sons early imbibe a distaste for agriculture—that as soon as they are of an age to be useful, they seek employment, and leave them to manage the homestead under the disadvantage of hired assistance." Now Mr. Editor, while it is not my present intention to enter fully into the reasons why farmers are frequently thus deprived of the assistance of their sons, I will hint at two or three of what are thought to be causes of such deprivation, by asking a few questions. There are young men in almost every part of the country, who show by their actions that they feel "above" earning an honest livelihood by the sweat of their brows; and while they are *very willing* to keep their hands and clothes from being soiled, and are *very willing* to receive a *full* share of the farming produce, and of the attention of farmers, and of farmer's wives and daughters; do they not receive more of these things, than the young men, who, with moderate desires, and industrious, frugal habits, have chosen the occupation of farmers for themselves? Do not some families forget that "it is a great error, that children may be left to run wild in every sort of street temptation," until it is as difficult to make them like farming work, as it is to make a six year old colt or steer like it? Do not many farmers forget that when young men work but little, and "go to school" much until they are nearly grown up, the turn of their minds and the strength of their bodies are poorly adapted for the farming profession?

Mr. Editor, my intention is to finish this communication by asking a few questions of a different nature from those just asked.

How did Philo Griswold,* of Vernon, Oneida Co., contrive to obtain 415 bushels and 13 lbs. of carrots from one fourth of an acre? How did E. Dayton,* of Vernon, manage to obtain 370 bushels and fifty pounds of potatoes from half an acre? How did C. W. Eels,* of Kirkland, manage to obtain 89 bushels and five pounds of Indian corn from one acre? Can George Vail,* of Troy, conveniently give a statement of the method he pursues to obtain very large crops of Indian corn?

Will a plow fixed on wheels, like some of the English plows, turn a more uniform furrow, as to depth and width; or will they hold easier than a plow without wheels?

Supposing potatoes for seed to be wet and rolled in plaster, and to have a table spoonful of plaster put on each after being dropped in the hill or drill, is there a possibility or a probability that the crop of potatoes, while growing, could so imbibe the plaster as to make them unhealthy for food?

How small an iron rod will suffice to protect a house or barn, 25 by 30 feet, from the bad effects of lightning.

Sandlake, March 9, 1846. S. S. G.

* We shall be pleased to receive replies from these gentlemen, to the questions of our correspondent.—ED.

REVIEW OF DOWNING'S FRUITS AND FRUIT TREES OF AMERICA.—No. I.

.....

WHEN a book is hopelessly weak or incorrect, it should be the object of criticism to exterminate it. But when a work is admitted to be, upon the whole, well done, criticism ought to be an assistance to it, and not a hindrance. Praise by the wholesale is better for the publisher than for the reputation of the author; since, in a work like Downing's, every pomologist knows that perfection is not attainable, and indiscriminate eulogy inclines the better read critic to rebutt the praise by a full development of the faults. Thus on one side there is general praise and faint blame; and on the other, faint praise and general blame.

It is charged against Mr. D. by implication, that he has added little to the stock of pomological knowledge that is *new;* and therefore that his book cannot be regarded as so greatly in advance of others. One would suppose this to be a criticism more appropriate to an oration, or a rhetorical effort of some sort, than to a Fruit Manual. A work which, like Manning's, embodies only one's own observations, must be limited, and of interest only to a few, and these advanced pomologists. Invaluable as are the labors of Manning, his work will be found in but few hands; since, being original, it is limited. There are a thousand observers, and hundreds of writers on fruit; each year the results of observation and experiment accumulate. The author who collects these scattered morsels, and puts them into good shape within a moderate compass, adding whatever his own eyes have seen that is new, has discharged a good work. We have never seen any reason to believe that Downing had not added much to his descriptions of fruit that is absolutely new. No one in his senses, could expect even a man born in a garden, to exhaust, at the first effort, so large, so tangled, so multifarious a subject as pomology. If Downing's work stands decidedly before any already published, that is praise enough.

A more serious charge is urged by a correspondent of Hovey's Magazine, (vol. 2, p. 48,) and endorsed by the accomplished editor of that invaluable Magazine. On p. 49 of this Magazine, Mr. Humrickhouse says—"No notice is taken of the fact that others had occupied the field before him. One would suppose, indeed, that a gap—an absolute want—of a manual and work of reference existed, and that he is the first and only one who ever conceived the idea of supplying it." Really, this is to the point, and sufficiently pointed. But what shall be said of the fairness of a critic who will say such things, when Mr. Downing, so far from neglecting to mention former treatises, *sets apart a chapter to them as* "BOOKS QUOTED;" giving them full title, size, date of publication, &c., &c. In this list *sixty-eight* authors are named, *thirty-three* of whom wrote expressly on pomological subjects! Perhaps it is thought by some, that an author ought to go bowing right hand and left through every page of his book, with profuse compliments, a hundred times repeated, like a gay beau in a drawing room! We prefer a more manly style of literature. Again, it is stated, (Hovey's Magazine, p. 48:) "He has nowhere, as I can see, suitably acknowledged that he has derived assistance from Kenrick or from Prince; and yet both are authors, from whom, it is apparent, that he has drawn as largely as from any others;" and the editor adds his hearty approval; specifies Kenrick, Coxe, Thatcher, Prince, Manning, "and *ten* volumes of our Magazine," which, it is said, are passed over in the *preface*; mention being made only of the London Horticultural Society's Catalogue! No man can pretend that Downing has omitted these authorities in the body of his book; or in the list of authors quoted; it is only in the *preface* that he neglects them! This is vastly too sensitive for our appreciation. Every page through the book gives these various authors and works specific credit for their specific part; all home and foreign authors are registered in a separate chapter, as the sources of his information; but because they are not a *third time* mentioned in the preface, it is said by Mr. Humrickhouse (p. 50,) "Charity, it must be said, impels us to attribute this omission to accident and over-sight, rather than to any deliberate intention."

But we have, in *other* quarters, seen charges of neglect, and of contempt of Mr. Kenrick. It was, we believe, in the Boston Courier that we first saw it. We have taken some pains to examine Mr. Downing's descriptions, one by one, with our eye upon his fidelity in this matter. We do not say that he is perfect. But we do say that he is not open to the sweeping charges so unjustly urged against him. Let us examine. In the descriptions of PEARS, Kendrick is mentioned eighteen times. What pears are they, with which his name is connected? Andrews, Bleecker's Meadow, Beurré d'Amalis, Burnett, Capsheaf, Cumberland, Dix, Fulton, M. Louise, Pitts' Prolific, Queen of the Low Countries, Washington, Lewis, Vicar of Winkfield, Wilhelmine—American pears, or foreign varieties of comparatively recent introduction. Now it is only in respect to these two classes of pears that Kenrick deserves credit. His descriptions of other sorts are borrowed absolutely or simply reproduced. Mr. Hovey thinks his Magazine neglected. This would certainly be a culpable neglect; for in no other periodical has there been so much done for American pomology. But we find it *nineteen* times mentioned in the list of pears. Kenrick is credited in the description of thirty-one apples; and these, chiefly, of the newer varieties, in respect to which only Kenrick ought to have credit.

We do not regard Mr. Downing as immaculate upon this point; it is to be expected that a revised edition will be more scrupulously careful; but we have seen nothing which justifies the charge of *general* disregard of the credit due to the authorities to whom he is indebted. And if there is a quiet assumption of originality pervading his pages, in things not original, let that man who has written a book without secret vanity, cast the first stone.

In proceeding now to an examination of portions of Mr. Downing's book, our desire is to help and not to hinder.

We shall, at present, confine our attention to the catalogue of apples and pears, for all other fruits of our zone together are not of importance equal to these; and if an author excels in respect to these, his success will cover a multitude of sins in the treatment of small fruits, and fruits of short duration. Mr. Downing has shown good judgment in making out his list of varieties; his descriptions, for the most part, seem to be from his own senses; he has added many interesting particulars in respect to fruits not recorded before, or else scattered in isolated sentences in magazines and journals.

But are his descriptions thorough and uniform? While he has added *materials* to pomology, has he advanced the science by reducing such materials to a consistent form? If we compare Mr. Downing's descriptions with those of Kenrick, or even of Manning, he excels them in fulness. If he be compared with classic European pomologists, he is decidedly inferior, both in the conception of what was to be done, and in a neat, systematic method of execution. Indeed Mr. Downing does not seem to have settled, before hand, in his mind, a *formula* of description; sometimes only three or four characteristics are given. Downing sins in excellent company. There is not an American pomological writer who appears *conceived* even, of a systematic, scientific description of fruits. European authors, decidedly more explicit and minute than we are, have never reduced the descriptive part of the science to anything like regularity. We do not suppose that there can be such exact and constant dissimilarities detected between variety and varieteis of a species, as exists between species and species of a genus. We do not think a description of fruits to be imperfect therefore, merely because it is less distinctive than a description of plants. But the more variable and obscure the points of difference between two varieties, the more scrupulously careful must we be to seize them. Where differences are broad and uniform, science can afford to

be careless, but not where they are vague and illusory. We can approximate a systematic accuracy. But it must be by making up in the *number* of determining circumstances, that which is wanting in the invariable distinctiveness of a few that are *specific*.

I. Downing's descriptions are quite *irregular* and *unequal*. Both his pears and apples are imperfect, but not alike imperfect. The descriptions of pears are decidedly in advance of those of the apple. It would seem as if the improvement which he gained by practice was very easily traced in its course on his pages.

Hardly two apples are described in reference to the same particulars. With respect to color of skin, size and form, eye and stem, he approaches the nearest to uniformity. But with respect to every other feature there is an utter want of regularity, which indicates not so much *carelessness* as the want of any settled plan or conception of a perfect scientific description.

We will, out of a multitude of similar cases, select a few as specimens of what we mean. Of the *Pumpkin Russet*, he says, "flesh exceedingly rich and sweet;" but he does not speak of its *texture*, whether coarse or fine; whether brittle or leathery. *Pomme de Neige*—"flesh remarkably white, very tender, juicy and good, with a slight perfume;" but is it sweet or sour, or subacid, or astringent? No one can tell by reading the joint descriptions of the *Red* and the *Yellow Ingestrie*, what their flavor is, since it is only said that they are "juicy and high flavored"—but whether the high flavored juice is sweet or sour, does not appear. These are not picked instances. They occur on almost every page of his list of apples. The *Summer Sweet Paradise* is, of course, sweet, since we are three times told of it, once in the title and twice in the text. The SWEET *Pearmain* also, is a "sweet apple" "of a very *saccharine* flavor." Of course it is *sweet*. Nos. 67, 68, 69, 74, 75, and very many more, are described without information as to their flavor except that, whatever it is, it is 'brisk,' or 'high,' or 'rich'—forlorn adjectives unaffianced to any substantive which they may qualify. Sometimes the health of the tree and its hardiness are given, and as often omitted. Sometimes its hardiness of bearing is mentioned, but oftener neglected. The color of the flesh is given in No. 82, but not in 83; in 84, but not in 85; from 86—92 inclusive, but not to the *second* 92, for the Bedfordshire Foundling and the Dutch Mignonne are both numbered 92. The color of the flesh is not given in 93, 97, 100, 101, 103, 110, although the intermediate numbers have it given. Why should one be minutely described, and not all? We should regard it an ungrateful requital for all the pleasure and profit which this volume has afforded us to hunt up and display what, to some, may seem to be mere "jots and tittles," were it not that these, in themselves, unimportant things mark decisively the absence in the author's *plan*, of a style of description which pomology always needed, but now begins imperiously to demand. And we are confident that a pomological manual, *on the right design*, is yet to be written. Our hearty wish is, that Mr. Downing's revised edition may be that manual.

II. We are lead, from these remarks, to consider, by itself, the *imperfect scale* of descriptions adopted by all our American pomological writers, upon which Mr. D. has not materially improved.

The description of the *tree* is very meagre or totally neglected. *Nothing at all* is said of it in cases out of the 174 apples numbered and described. The general shape of the tree is given in but *thirty-eight* instances in the same number.

The *color of the wood* is, usually, noticed in the accounts of pears; but in the account of apples in not one case, we should think, in ten.

The peculiar *growth of the young wood*, in a great majority of cases, is not noticed; but more frequently in the pear than in the apple list. The least practiced observer knows how striking is this feature of the face of a tree. We do not remember an instance where the *buds* have been employed as a characteristic. Are distinctive marks so numerous that such an one as this can be spared? The shape, color, size, prominence, and shoulder of buds, together with their interstitial spaces, form too remarkable a portion of trees to be absolutely overlooked in a book describing the "fruits and *fruit trees* of America."

Equally noticeable is the almost entire neglect of the *core and seed*, as identifying marks. Once in a while, as in the case of the Belle Fleur, the Roman Stem, the Spitzenberg, and the Pomme Royal, we are told, that the cores are hollow. But neither among pears or apples, is the core or seed made to be of any importance. This is the more remarkable as being a decided *retrocession* in the art of description. Prince, wisely following Continental authors, is careful in his description of pears, to give, and with some minuteness, the peculiarities of the seed. But Downing, injudiciously misled by, in this respect, the decidedly bad example of British authors, has, almost without exception, neglected this noble criterion. There is not another single feature, either of fruit or fruit trees, which we could not spare better than the *core and seed*. Not only may varieties be marked by their seeds, but they form, in connection with the core, important elements of diagnoses of *qualities*. A Long-Keeper, usually has a very small, compact core, with few seeds. A highly improved and luscious pear, not unfrequently is wholly seedless; while fruits not far removed from the wild state abound in seeds. Whenever a *system of description* shall have been formed, we venture to predict that the *core and seed* will be ranked at a higher value in it than any one other element of discrimination and description.

The same neglect or casual notice is bestowed upon the *leaf*. If anything about it is remarkable it is mentioned, not otherwise: But is there a page of any book that was ever printed, that has more reading on it than is on a leaf, if one is only taught to read it? *It* too, is not only a sign of difference but very often of *quality*. Mr. D. has availed himself of this criterion in describing peaches. Is it a legible sign only in the peach orchard? He that is ignorant of these marks, and only can tell one *fruit* from another, is yet in the a b c of pomology. Who but a tyro, on importing *Coe's Golden Drop*, would not at once perceive the imposition, if there was one, the moment his eye saw a bud, or its shoulder? Van Mons learned to select stocks for his experiments, as well by the wood and bud in winter, as by the leaf and growth of summer. In a large bed of seedlings every experimenter ought to know by wood and leaf what to select as prognosticating good fruit, and what to reject, without waiting to see the fruit. Nurserymen of our acquaintance, without book, label, or stake, can tell every well known variety on their grounds. One of our acquaintance never had a mark, label, stake, or register, of any kind upon his ground; a culpable reliance on his ability to read tree-faces; for, on his throwing up the business suddenly, his successor fell into innumerable mistakes. It is just as easy for a pomologist to know the face of every variety, as for a shepherd to know the face of every sheep in his flock, or a grazier every animal of his herd.

III. Although the "Fruits and Fruit Trees of America" professes to give the process of management only for the *garden and the orchard*, it ought to include, and we presume was designed to embrace the essential features of nursery culture. Every cultivator of fruit must be a private nurseryman; he needs the same information, the same directions as if he were a commercial gardener. He that designs planting an orchard ought to know the *disposition* of each variety of fruit tree, that he may suit the circumstance of his soil, or provide for the peculiarities of a tree, as a farmer needs to know the peculiarities of the different breeds of hogs and cattle. With a large number of persons it would be enough to say of fruits,—"superb," "extra-superb," "superlatively grand," "extra magnificent;" for such, a *princely* catalogue would answer every purpose. But such as have some knowledge, and every year, we are happy to believe, the number of such increases, ask, not the author's blue eulogy, but a definite statement of all those special qualities on which such eulogy is founded. The exact *taste* of each variety of fruit should be studied in respect to soil; some, and but few, love

strong clays; yet fewer thrive upon wet soils; but some will, as the Sweet or Carolina June, which does well on quite wet soils; some refuse their gifts except upon a warm and rich sand; some, and by far the greatest number, love a deep loam, with a subsoil moist without being wet. The buds of some varieties escape the vernal frosts by their hardiness; some by putting forth later than their orchard-brethren. Some varieties thrive admirably by ground or root grafting, while very many, so worked, are killed off during the first winter; some varieties, if budded, grow off with alacrity, others are dull and unwilling; some form their tops with facility and beauty; others, like many men, are rambling, awkward, and averse to any head at all. Some sorts, put upon what stock you will, have singularly massive roots; others have fine and slender ones. Every variety of tree has traits of disposition peculiar to itself; and in respect to traits possessed in common, even these may be classified. In every description there should be, at least, an attempt at giving these various nursery peculiarities. It cannot be done, as yet, with any considerable accuracy. *Fruit trees have not yet been minutely studied.* A florist can give you a thousand times more minute and special information in respect to the peculiar habits and wants of his flowers, than an orchardist can of his trees. Doubtless, it is easier to do it in plants which have a short period; whose whole life passes along before the eye every season, than in plants whose very youth outlasts ten generations of Dahlias, Pansies, Balsams, &c. But that only makes it the more important that we should be up and doing. Let no work be regarded as classic which does not take into its *design* the most thorough enunciation of all the peculiarities of fruits, and pomology will receive more advantage in ten years, that it could by a hundred years of rambling, unregulated, discursive descriptions.

We have drawn our remarks out too long already; and must reserve other considerations for another number. We shall then give Mr. Downing a chance to pay us back in our own coin, as we hope to give the description of some half-dozen apples, that we may by example develop our ideas of the method of describing fruits. The ability which Mr. D. has shown as a horticultural writer, his industry in collecting materials for this, his last work; the skill which he has shown himself to possess in describing fruits, give the public a right to expect that he will "go on unto perfection," and if Mr. D. will adopt a higher standard and set out with a design of a more systematic description of fruits, every liberal cultivator in the land will be glad to put at his disposal whatever of minute observation he may possess. HENRY WARD BEECHER.

Indianapolis, Ia., March 5, 1846.

CULTURE OF FLAX.

The culture of *Flax* is becoming a very important branch of agricultural pursuit. But a few years since, if a farmer sowed more than a bushel of flax-seed, unless he was a very extensive farmer, he was considered by his neighbors as bordering on insanity. The great majority of farmers in those days, sowed but a few quarts of seed, with the view more particularly of raising flax rather than seed. It is now no uncommon thing for farmers to sow twenty, thirty and sometimes fifty bus els and upwards; and notwithstanding the flax is usually destroyed, the seed alone, as a general thing, pays as well and frequently better, than any other crop. The flax is considered of no value from the fact, that the expense of pulling, rotting, dressing and preparing for market, over balances its worth, and hence farmers have resorted to the most expeditious modes of getting rid of it, such as burning it, throwing it into wet marshy places, &c. I have recently had conversations with several farmers, who have for the last two years engaged quite largely in raising it, who assure me that if the flax is cut before it becomes "dead ripe," by paying the same attention to it in curing it that is usually bestowed upon the securing of hay, cattle will not only eat it *readily*, but are very fond of it, besides it keeps them in a very thriving, healthy condition. Those persons with whom I conversed, agreed in their belief, that the flax thus secured, is worth almost, if not quite, as much as the seed.

I wish to mention another important fact in relation to raising flax-seed, which every farmer should know. Several farmers of my acquaintance, the past season, sowed flax-seed and barley on the same ground, and in every instance the yield of either kind, was as great as if sowed separately, besides flax and barley straw combined, makes very excellent fodder. By having proper screens, there is no difficulty in separating the flax-seed from the barley. If, by sowing flax-seed and barley together, twice the amount can be obtained from the same ground, is it not worth at least the consideration of every farmer? N.

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We have received several communications in reference to the practice of growing flax and barley together, but know nothing of its advantages from personal experience. We were not aware that the seed of flax would be matured while the stalk was in so green a state as to be good for fodder; but it will be seen that the above and several other articles speak of it as being valuable for this purpose when mixed with barley straw, and that at the same time a crop of seed is obtained in connexion with the barley.—ED.

SHEEP—ESCURIAL AND ELECTORAL SAXONY.

Are the Spanish Escurial and the Electoral Saxony the same race of sheep? This inquiry has been raised in my mind by reading an article entitled "SAXON SHEEP AND THEIR CROSSES" in the volume of the Cultivator for 1844, page 350. In my ignorance I had supposed they were as distinct as any *two races* of German and Spanish sheep *can be*. If they are the *same thing*, as this writer seems to take it for granted, then all this flourish, which has been made about the superiority of the pure Electoral Saxony Sheep, imported and bred by the late lamented Mr. Grove, is moonshine. For there are men in the country who profess to have the pure Escurials—and if it can be *proved* that they are the real "simon pure" *Electoral Saxons*, Escurials will be thicker than "hair on a dog's back" before 1846 is at an end—the simple reasons being, that Electoral Saxons are in great request and command higher prices.

I had supposed that the Escurials were to be found only in Spain and the Electoral Saxons only in Saxony —and *elsewhere*, only as they have been imported from these countries. I have supposed that an Electoral Saxon sheep never was in Spain—and that the Spaniards have no such variety—and I had supposed that the six varieties of sheep, which Consul Jarvis imported into the United States, were only *sub-varieties* of the Spanish Merino Sheep—*all excellent*, and all in a great measure resembling each other. The Escurials were one of the six—and many have contended that they were not a whit behind any other—while all were similar, each had its excellencies and peculiarities. Will you, Mr. Editor, be pleased to show what light you can on this subject? INQUIRER.

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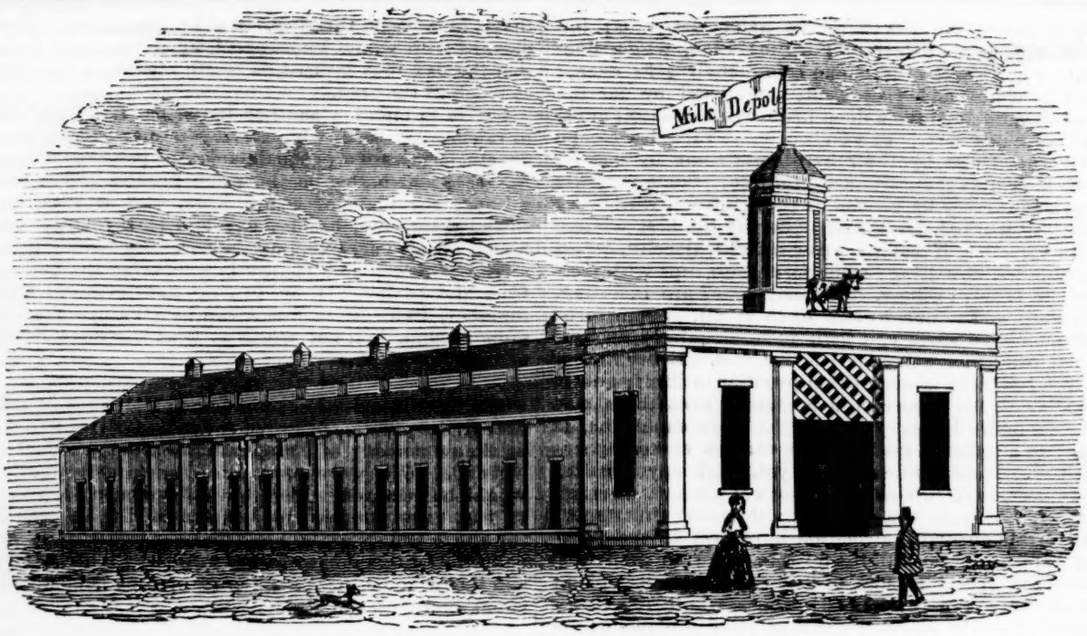
NOTE.—From the best accounts, the origin of the Saxon Merino Sheep, was 200 ewes and 100 rams sent by the King of Spain to the Elector of Saxony in 1765. They are said to have been mostly of the Escurial variety, which are acknowledged on all hands to produce the finest wool of any of the Spanish races, and were particularly cultivated by the Spanish kings. The Electoral Saxon sheep have, according to their history, descended mostly from this Escurial stock. It is claimed by some that they have been improved in respect to fineness of wool, since their transfer to Saxony. Our own observation does not permit us to give an opinion on this point. It must be obvious, however, that the *blood* of the Electoral Saxon and the Escurial must be nearly the same, the former being only a lateral branch of the original stock.



DEPOT OF THE ROCHESTER CITY MILK COMPANY.—(Fig. 32.)

Office of the Rochester City Milk Co.,
Rochester, March 2, 1846.

LUTHER TUCKER, ESQ.—In compliance with your request, I herewith transmit to you, a sketch of the Milking House and Depot, which our Company propose to construct this spring, in this city, immediately on the banks of the Genesee river, near the centre of the town, for the accommodation of *one hundred cows*, and for the sale of milk of the very best quality.

The building is in the shape of a ⊣. The front of brick, 50 feet in length, and 25 feet in depth, and 20 feet in height, with a rear building 175 feet long, and 32 feet in width—built with a centre hall or arcade, twelve feet wide and twenty feet high, with windows and ventilators in the tops, (as shown in the sketch,) to admit a free circulation of air, in the warm seasons of the year.

On each side of this hall, there is a range of mangers and stanchions for *fifty cows*—with troughs in front of them, through which water is to be constantly running.

The floor is to be of clay, paved with flat stone, set *edgeways*, in the rear of the cows, with a gutter one foot in width, immediately behind the cows; and between these gutters and the doors at the sides of the building, there is an alley, *five* feet in width on each side. The doors for the entrance of the cows are three and a half feet wide, seven feet high, and twelve feet apart. Over the cows, between the hall and the sides of the building, there are floors for the reception of the winter fodder of the stock, capable of holding two hundred tons of hay or corn fodder.

The gutters drain into cisterns in the basement, and trap doors in them let the manure down into carts, in which it is drawn daily to the company farms in the vicinity of the city, where the crops are produced to supply the milch cows in the Depot. The teams bring down a load of grass or hay, and carry back in return, a load of manure—it being cheaper to transport the feed to cows than to cart the milk twice a day, from the farms to the city.

The front of the building is occupied for an office, and rooms for the sales of milk, ice-cream, &c., and the attic for the lodging room of the men belonging to the establishment, while the cellar is used for roots, and milk room, and also a part of it for a small steam engine, employed to cut up and *steam the food* for the cattle, pump the water from the river to supply the reservoirs in the building, and to *heat* the stable in winter, by steam.

In the rear of the office are the rooms for the milk-wagons, and sleighs, and adjoining these is the stable for the horses that are used for distributing milk throughout the city.

The whole cost of the building is estimated at $2,500, including the engine, fixtures, &c.

I will, if you desire it, furnish you with a statement of the manner in which the establishment is to be conducted, and the method of keeping the cows, &c., &c.

Truly yours,
C. B. STUART,
General Ag't Rochester City Milk Co.

P. S. The Rochester City Milk Company furnishes the citizens of Rochester with pure and wholesome milk, at the following low tariff of prices.

DAILY AVERAGE IN 1 MONTH.	From 1st June to 1st October.	From 1st October to 1st June.
36 qts. and over,	2 cents per quart.	2½ cents per quart.
12 " under 36,	2¼ " "	3 " "
2 " " 12,	2¼ " "	3½ " "
1 " " 2,	3 " "	4 " "

To find the *average*, add the quantity taken in *one* month, and divide by the days in the month.

FRUIT FOR COOKING.

L. TUCKER, ESQ.—In an article at page 379 of your December number, the writer who describes "Comstock's Garden Apple," falls into a very great error. He says:—"It is generally supposed that for *culinary* purposes, fruit of inferior quality will answer; hence we see in works on promology, and in Nursery Catalogues the division into *table* and *kitchen* varieties. The distinction to which he thus refers, "in nursery catalogues," &c., does not, however, mean any such thing. It refers simply to a distinctive character, and *to a superiority in quality* for a specific object. In regard to pears, we have table and cooking pears, and the same as respects plums, cherries, and other fruits. So in respect to apples: many of the varieties of sweet apples, and others of acid or of an astringent character, which are altogether ill suited for the table, are found to be admirably adapted for cooking, and it is for their *superior qualities* when cooked, and not on account of their inferior quality, that the term kitchen has been applied to them.

WM. R. PRINCE.

Prince's Nurseries, Flushing, Feb'y 8, 1846.

ICELAND SHEEP.—(Fig. 35.)

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EXCEPTING the dog, no species of domestic animals presents such remarkable variations of character as the sheep. What a contrast, for instance, is shown by comparing the soft and beautiful covering of some of the Spanish breeds with the hairy and shaggy fleeces of the argali, the musmon, or some of the wild races of the Asiatic mountains! Again, a diversity no less striking is seen by comparing the small, light, smooth head of the Leicester, with that of some of the Tartarian, or the Iceland sheep; the latter in some instances carrying four or five, and even eight horns, of from a foot to more than two feet in length.

In noticing Mr. MORRELL'S "American Shepherd" last month, we gave a cut of a "fat-rumped" ram. We now present a cut of an Iceland sheep, with three horns. The number of horns constitutes the chief peculiarity of these sheep, though they are very useful in the country to which they belong, being hardy, and obtaining their living in the barren and rugged parts of that island without attention from man. Their size is medium—their fleece thick, but rather coarse, and only calculated for inferior fabrics. Some of our readers may recollect having seen for several years, one of this kind of sheep with four horns, at the farm of Mr. PRENTICE, near this city.

We make another extract from Mr. MORRELL'S book on the subject of

PARTURITION OR LAMBING.

"The usual period of gestation with the ewe is five months, or an average of 152 days.

The proper time for parturition must be determined by circumstances, of which climate and locality are the most prominent, and these the flock-master must steadily keep in view. The month generally selected in the Northern and Middle States is May, the vicissitudes of the climate forbidding an earlier period, unless in instances where buildings are provided for shelter, the expense of which is greater than the majority of farmers are willing to incur.

The ewes during pregnancy should be disturbed as little as possible, and every attention paid to the quantity and quality of their food. Ewes, however, should not be kept *fat* at this stage; indeed this state is injurious, as it predisposes them sometimes to abortion; but what is usually termed "good store condition" should be maintained through the whole period of gestation. Neither should ewes be exposed to storms and cold during the winter and early spring months, but thoroughly protected from both. It cannot be expected from any domestic animal a healthy offspring, in our rigorous climate, if the dam has been permitted to suffer the hardships of cold and starvation; therefore it will be wise if the sheep husbandman will always hold up to view the apothegm, 'so the dam, so the offspring.' There must be condition to sustain the mother in the trying hour of lamb-birth; and like good condition is equally necessary to sustain the lamb subsequently, and impart to it sound constitution, size, and thrift.

The field chosen for the ewes to fold should be dry, free from stumps, open ditches, and possess as level a surface as possible, as in little hollows ewes are liable to be *cast*, which is caused by lazily stretching themselves in sunny weather, when in a lying posture. In this situation they will often be found flat on their backs and violently kicking the air, without the power of recovery, until aided; and if unseen by the shepherd, death will follow sometimes in a few hours.

But perhaps no field affords that smoothness of surface to prevent these too often fatal occurrences, and therefore the duty devolves upon the shepherd of passing leisurely over every part of the field, several times during the day, to guard against them. But this duty must not be delayed until some of the ewes have dropped their lambs; he must commence his career of watchfulnesss at least ten days before, for it is very common with ewes that are in over good condition to be found in this perilous situation some days before their time.

"The lambs of fine-wooled sheep are extremely sensitive to cold and wet when they drop, and to guard against exposure, the sheep-master must endeavor to anticipate storms, and place his flocks beforehand under shelters. These should be capacious, as the ewe dislikes too much company at the time of parturition, as will be noticed in her retiring often quite distantly, if in a field from the rest of her companions, when the event is about to transpire. In such instances where no sheltering is provided, greater labor and vigilance must be employed, the presence of the flock-tender being constantly needed, with his bottle of warm milk, and putting the more helpless in a large basket, lined with hay or straw, and bringing them before the fire for an hour or more, until animation is restored. When lambs are separated from their dams under such circumstances, care should be observed not to have them wrapped or touched with anything that is offensive, as its scent, when very young, is the principal source of recognition by the mother. A clean blanket or woolen cloth will be best, if swaddling should be found necessary.

"If the season has been unpropitious for early grass, and consequently the keep during parturition too low, the flock should have the run of two lots, which should adjoin, and the communication at all times kept open. The adoption of this course prevents the confusion incident to changing the whole flock at once.

"The number of ewes herding together at this important period should not exceed one hundred, and a still less number will result advantageously to both the flock and master. He should at all seasons keep before him the fact, *that a few sheep kept together will do better than many*, which will be more particularly enforced hereafter."

CURE FOR DIARRHŒA.—A certain cure for this complaint is found in rice water. Boil the rice, take the water, make it palateable with salt, and drink it copiously while warm. We never knew this to fail.

THE CURRANT

THE remarkable hardiness and productiveness of this truly valuable fruit, have induced most landowners to neglect wholly all care and culture of the bushes. In order to exhibit clearly the difference between good and bad management, we annex exact representations of the size of the fruit taken from two different bushes of the common red currant in the same garden. The smaller bunch was was taken from the old mass of bushes, growing thickly, stunted, and without pruning or culture. The larger was from a small, vigorous, and well cultivated bush in rich ground. The difference in size, should satisfy every one of the great loss sustained by a want of culture and attention.

Fig. 36.

CULTURE OF FRUIT.

At what period of his life shall a man plant fruit trees?

MR. TUCKER—There is an old saying that

He who plants pears,
Plants for his heirs—

an adage which in one sense is doubtless true, for short lived indeed must be the pear tree that does not outlive him who plants it; but the maxim intended to be conveyed by the proverb undoubtedly is, that the pear is so long in coming into bearing, that he who plants the tree can scarcely expect to taste its fruit himself, and consequently plants it solely for the benefit of his heirs. Now if this were strictly true it would afford no very just ground to refrain from planting, since there is more forecast, and more benevolence displayed in planting a tree for the benefit of one's heirs, than there is in hoarding up gold for them; for the tree will neither run nor fly away, and if well selected and well planted, will continue to bear fruit of great value, for many generations, without much after attention; while all experience shows that too few of the heirs of the wealthy have the skill to prevent gold from taking wings to itself and flying away. Nor would it be very easy to show that we are less bound to plant trees for our posterity than our ancestors were to plant them for us, since the obligation seems equally binding upon every successive generation.

But the following statement will show that the musty old proverb, in the selfish caution it was designed to convey, is entirely without foundation. In the spring of 1843, the writer of this article procured a large pear tree, and grafted several choice varieties upon it, some of which bore fruit the succeeding year, and several more the season that has just passed. In the same spring a scion of the Seckel pear was spliced upon the top of a young apple tree, three feet from the ground. Finding the next season that the graft had acquired about twice the thickness of the stock upon which it was growing, another small apple tree was placed along side of it, and united with the graft six inches above its insertion, in such a manner as to secure a firm union between the two trees. This precaution was taken to prevent the tree from breaking down when it should come into bearing. In May last, two years from the insertion of the graft, it was found to be in blossom, being then 5 feet 8 inches high. It produced 14 pears, four of which were accidentally destroyed; the remaining ten ripened. These pears exceeded by more than one third the size the Seckel pear is usually found to acquire. Several of them weighed over three, and one of them more than five ounces; the average weight of this pear, as seen here, or found in the New-York markets, being scarcely two ounces. A friend, Mr. James Dixon, presented me some unusually fine specimens last October, one of which weighed three ounces; the average of the rest was but two ounces.

These experiments, so recently made, if we had no other facts to sustain them, would show that no man, who has strength and capacity to perform the operation, need neglect planting or grafting trees from an apprehension that he shall not live to see their fruits himself; for here is an instance of a man, at the age of 56, planting the seed of an apple of which he had just been eating; at 58 he grafts the tree with the Seckel pear, and at 60, finds it producing some of the finest fruits of its kind that had probably ever been seen. And in all this there is nothing that may not be readily accomplished by almost any person who earnestly applies himself to the task. The cause of the extraordinary size of the fruit requires indeed a little explanation; and this may be found in part in the extreme fertility of the soil in which the tree stands, (the ground having been highly manured for garden purposes, for several successive years, frequently from the hen-house,) and partly by a certain degree of dwarfing that results from grafting the pear upon the apple, and from the constriction produced by the sudden expansion of the graft at its junction with the stock, which operates like a ligature in detaining a greater quantity of sap in the fruit branches.

Nothing is more common than to hear a man at the very period of his life when he is best capable of doing the thing well—from 50 to 60—excusing himself from putting out fruit trees upon the plea that he is too old to be benefitted by it. The two following instances will show at how late a period of life a fondness for the cultivation of fruit has been practically manifested, and at how much later a period of life has been prolonged, as if in reward of the deed.

An aged lady, in the adjoining town of Greenwich, not many years ago, planted a peach in her one hundredth year, and lived to eat the first fruit the tree produced. The Rev. Mr. Cobb, of Braintree, Mass., set out an orchard at the advanced age of 77, and was laughed at by his neighbors, who were much too wise to plant frees for posterity—he lived thirty years afterwards. These it will be admitted are extreme cases, and yet many not very dissimilar ones could easily be collected, were due justice done to the scattered individual enterprise of the nation.

But however meritorious the humblest effort to improve and multiply the kindly fruits of the earth may be, and however great is our obligation to the many nurserymen and skilful horticulturists, as well as to the private individuals of our country, who have devoted their time and resources to the collection and dissemination of the valuable seedling fruits of our land, as well as to the importation of the numerous choice kinds from abroad, time only at present will admit of a passing allusion to the splendid achievments of the two greatest pomologists of this, or any other age; the late Thomas Andrew Knight, of England, and Dr. Van Mons, of Belgium. To the scientific and unwearied efforts of these truly great men, we are indebted for a great number of the fruits, especially of the pear kind, now in cultivation. Mr. Knight pursued the direct mode of obtaining new varieties by cross breeding, from which process sprung those noble pears, the Dunmore and the Monarch. Dr. Van Mons availed himself of that law of vegetable economy which disposes fruit, under certain favorable circumstances, to a gradual improvement for several successive generations; a law which he seems to have been the first thoroughly to elucidate. His method was to plant and replant the first fruit of young seedling trees, from three to five successive generations. At every successive planting the trees came sooner into bearing—those of the fifth generation bearing the third year, and nearly all of them producing choice fruit. Beyond the third generation in the stone fruits, the fourth in the apple, and the fifth in the pear,

they were not often found to improve; the next movement being generally a retrograde one, sometimes a return even to the most indifferent kinds.

Thus did this most indefatigable man go on planting and replanting, until having devoted the greater part of his life to the amelioration of fruit, his garden, many years before his death, contained of pears alone, more than two thousand varieties, none of which were below mediocrity, and many of them of surpassing excellence. In accomplishing this splendid achievement, he actually planted himself, and carefully examined the fruit of no less than 80,000 varieties. What a task for a single individual, and what a rebuke for those who never plant at all! To him we are indebted for those splendid pears, the Beurre Diel, Beurre Bosc, Dundas, Frederick of Wurtemburg, Queen of the Low Countries, and many others. What a debt of gratitude do we not owe to the successful cultivators of fruit generally, and to those great benefactors of the human family, just alluded to, in particular! Let us evince our sense of the obligation by thoroughly opening our eyes to the good they have done us, and by availing ourselves without delay of the princely banquet they have set before us.

It is now time to recur to the question at the head of this article. "At what period of his life should a man plant fruit trees?" And will not my readers now agree with me that the period should only be limited by actual incapacity, and that we should continue to plant, to cultivate, and to improve, while providence lends us strength to execute the task; never doubting that we shall reap the fruits of our labor; and with the proud consciousness that if we have done something for ourselves, we have done far more for posterity, who will have cause to remember and to bless us.

Port Chester, Jan. 3, 1846. TH. CLOSE.

THE FRUIT CULTURIST:

ADAPTED to the climate of the Northern States, containing directions for raising Young Trees in the Nursery, and for the management of the Orchard and Fruit Garden. By JOHN J. THOMAS.

MR. THOMAS is extensively known as an intelligent and successful cultivator of fruits. His extensive practical knowledge and habitual accuracy, fully entitle his observations to the respect and confidence with which they are generally received. In the work before us, his objects have been to furnish useful directions to those who may be little acquainted with the management of fruit trees, to promote the culture of the best varieties, and by encouraging the adoption of a proper system, to increase the production of fruits, and render more certain the profits of their cultivation. The author has not intended in this case to furnish a large work—it consists of 220 pages, 18 mo, divided into two general divisions; the first containing twelve chapters under the head of "GENERAL DIRECTIONS AND PRACTICES,"—and the second, twelve chapters, "ON THE DIFFERENT KINDS OF FRUITS." To these is added a "DESCRIPTIVE LIST OF FRUITS," embracing apples, pears, cherries, plums, peaches, nectarines, and apricots. An attentive examination of the book only is necessary to satisfy those acquainted with the subject, that it is well calculated to promote the objects for which it was designed. As applicable to the season, we present the following extracts on

GRAFTING.

"The great number of modes described in books, have tended rather to bewilder than to enlighten beginners; the following remarks, therefore, are more for the purpose of laying down *reasons* on which success depends, than for pointing out the peculiar modes of operation, which may be varied according to convenience, provided attention is given to the essential particulars.

"Propagation by grafting differs mainly and essentially from increasing by cuttings, by inserting the cutting into the growing stock of another tree, instead of directly into the soil. The stock thus supplies the sap, as the soil does in the case of a cutting; and the graft, instead of making roots of its own, extends its forming wood downwards, through the inner bark, into the stock itself. Hence there are two chief requisites for success: the first, that the graft be so set in the stock, that the sap may flow upward without interruption; and the second, that the forming wood may flow downward uninterruptedly through the inner bark.

"To effect these two requisites, it is needful, *first*, that the operation be performed with a sharp knife, that the vessels and pores may be cut smoothly and evenly, and the two parts be brought into immediate and even contact. *Secondly*, that the operation be so contrived that a permanent and considerable pressure be applied to keep all parts of these cut faces closely together. *Thirdly*, that the line of division between the inner bark and the wood, should coincide or exactly correspond in each; for if the inner bark of the one sets wholly on the wood of the other, the upward current through the wood and back through the bark, is broken, and the graft cannot flourish nor grow. And, *fourthly*, that the wounded parts made by the operation, be effectually excluded from the external air, chiefly to retain a due quantity of moisture in the graft, but also to exclude the wet, until, by the growth of the graft, the union is effected.

"1. The first requisite is best attained by keeping a keen, flat-bladed knife to cut the faces, and another knife for other purposes.

"2. The second requires that the jaws of the stock in cleft-grafting, press with some force, but not too much, against the wedge-shaped sides of the graft. A stock one-third of an inch in diameter will sometimes do this sufficiently; but three-quarters of an inch is a more convenient size. In whip-grafting, the tongue and slit should be firmly crowded or bound together.

3. "The third requisite is attained by close examination.

"4. The fourth is accomplished by plasters of grafting-wax, and by the application of grafting-clay. Grafting wax may be made by melting together one pound of beeswax, two of tallow, and four of rosin.* It is spread, when melted or softened, on muslin or thin unsized paper, with a brush or spatula. It is sometimes applied without plasters, in which case it should be worked with wet hands, until it may be drawn out into ribbons of wax, which are wrapped round the part. In all cases it should be applied closely, so as to allow if possible no interstices, and covering cut or split surface otherwise exposed to the air. In cool weather, a lantern, chafing-dish, or hot brick, is necessary to soften the plasters before applying them.

"The annexed figures represent the two most common modes usually adopted for fruit-trees; fig. 37, representing whip-grafting, which if well performed with the parts closely pressed together, needs no ligature to keep the graft in its place; and fig. 38, the common mode, or cleft-grafting, which except for small stocks, is generally found best and most certain of success.

Fig 37. Fig. 38.

"It is hardly necessary here to mention that propagation by grafting and by cuttings is to be performed early in spring before the buds swell;† and that the grafts or cuttings may be cut late in autumn or at any time during winter, provided the natural moisture is preserved until they are used. A convenient mode of thus preserving them, is to wrap or imbed them in damp, not wet moss; or bury them in a box, beneath the surface of a dry spot of earth, the box to be open downwards, and the grafts to be kept from contact with the earth by sticks across the inside of the box."

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* More wax and less rosin is less adhesive to the hands, but more expensive.

† Grafts, if kept in a cold place, in a dormant state, till the leaves of the stock are expanded, may generally be inserted with success, if of the apple and pear. Cuttings are used at various seasons of the year, in hot-house culture

SUPPORTS FOR TWINING ANNUALS.

The annexed figure represents a neat and simple mode of constructing one of these supports. It may be used with a fine effect for such plants as the morning glory, cypress vine, and such delicate twiners as readily ascend to a height of several feet.

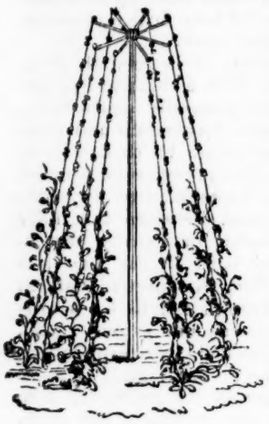


Fig 39.

The centre pillar is made of wood set firmly in the soil, and furnished with short radiating arms at the top. From the ends of these, small wire chains are stretched in a downward direction and fastened at the bottom, by means of wooden or metalic hooks driven into the earth.—These chains may be cheaply and conveniently made with common wire worked into long links like those used by surveyors.

FRUITS.—WINTER APPLES.

MR. EDITOR—Permit me to lay before your numerous readers, some remarks on the most prominent winter apples cultivated in western New-York. It is well to compare notes on this subject with other parts of our country. The growing of choice winter apples for the market, has now become something more than a mere retail business.

I first notice the Newtown pippin, from the fact that no fruit is oftener inquired for than this. Who has not heard of the wonderful crops of this apple gathered from the thousand trees of Mr. Pell, of Ulster county? The published statements of Mr. Pell's success in growing this fruit, has no doubt been quite beneficial to the community at large; but at the same time has had the tendency to lead many into error in regard to it. There are two varieties of this apple, the yellow and the green; neither of which have succeeded well in this section of country, or in the western States; both are of superior flavor, and valuable for their long keeping qualities. With us it is not very productive, and the fruit being very liable to be affected with black spots or canker, renders it unsightly and unsaleable, and is now but little cultivated.

Baldwin, sometimes called the Red Baldwin Pippin. A noble fruit, and well worthy of extensive cultivation. It combines all of the essential qualities, which go to constitute a superior fruit; fine rich flavored; fair size; fine appearance; productiveness; long keeping, and not subject to black spots or canker. This apple is extensively cultivated near Boston, where it is esteemed very highly. It more than sustains its high reputation here. December to March.

Boston or Roxbury Russet. Deserves a place in every good collection, succeeds admirably in the west, very productive, always fair, and is inferior to no other for long keeping. This and the golden Russet, are near allied to each other. The last named is the smallest. The Boston Russet has become so popular that it is now extensively counterfeited. Not however after the manner of making wooden nutmegs; but many of our fruit growers sell all sorts of russets under this popular name.

Rhode Island Greening. One of our most productive sorts, often producing wonderful crops. The writer has often taken six and seven barrels from a single tree. Few sorts are more profitable than this. Many have set out large orchards of this variety. The Fall Pippin and several other sorts are often called by this name. The true Rhode Island Greening never becomes yellow; but is of a dark green color, and at maturity, of a light green. The fruit is of first quality, but not equal in flavor to some others. November to March.

Esopus Spitzenberg. This fruit always commands the highest price in the market. Its superior rich flavor, together with its beautiful color, renders it a favorite for the desert. It is not quite as productive as some other sorts, yet, on the whole, yielding an average crop. It is extensively cultivated in Western New-York, and in the western states. More valuable than any other variety of the Spitzenberg. Nov. to March.

Seek-no-farther; of which we have three distinct varieties, all highly esteemed. The Westfield Seek-no-farther, as described by Downing, is a well known New-England variety; a productive and popular fruit. Dec. to February.

Russet Seek-no-farther, very much resembles the above in shape and appearance, but is nearly covered with a thin russet. Somewhat extensively cultivated in Niagara county. Productive, and will keep somewhat longer than the first named variety. Dec. to March.

Red Seek-no-farther; often known as the Red Gilliflower; a very superior fruit, supposed to be a native of western New-York. Fruit of medium size, form very round, the eye and crown nearly of the same size; skin of a fine orange yellow, nearly covered with a fine brilliant red, approaching to dark crimson on the side next the sun; and dotted with dark russet dots, which are much more prominent on the shady side of the fruit. Stalk three-fourths of an inch long, set in a rather narrow, funnel-like cavity. Calyx nearly closed, set in a wide, shallow, smooth basin. Flesh yellowish white, crisp, of a very agreeable acid, rich, brisk flavor. The tree is a fine grower, and very productive. Nov. to February.

Lady Apple; a beautiful little apple of fine, rich flavor; a favorite among the ladies for the desert. Not much cultivated, although productive; yet too small for profit. "So small," says a lady, "that it would take a cart load of them to make a bushel." December to April.

Pomme Grise, or Canada Gray Apple, a fine gray russet, below medium size, and of rich flavor. There are two varieties called by this name. The smallest is the true one; very productive, and a first rate desert fruit. Highly esteemed in Canada, and cultivated with great success in Niagara county. Dec. to March.

Detroit Red, or Detroit Black Apple. An apple of exalted merit, supposed to have originated at Detroit. Fruit of large size, often very large, generally with prominent uneven ribs. Some specimens quite flat, others rather oblong, large at base and eye. Skin fine crimson, becoming much darker when fully matured. Stem three-fourths of an inch long; calyx mostly closed, set in a wide and shallow plaited basin; flesh white, stained with red, crisp, juicy, and of a very agreeable, moderately acid flavor. Oct. to January. This fruit has become exceedingly popular wherever known. It commands a high price, and finds a a ready sale in the market. It is much larger than the Esopus Spitzenbergh, and its striking appearance commands attention. The tree is not a very vigorous grower, but is very productive, and well worthy of more extensve cultivation. This fruit is widely different from the Red Winter Calville, or Calville Rouge, or from several other varieties of the Black Apple, which are sometimes called by this name.

Tallman Sweeting. This fruit so much admired in its own New-England, has gained but little credit in emigrating to the west. It is inferior in flavor and often insipid. With the *swinish* multitude however, it is held in high repute, and its productiveness renders it worthy of cultivation for feeding stock.

Ambrosial. The popularity of this fruit has now passed away. Some years since, a brother nurseryman and myself were the favored recipients of a few scions of this noted fruit. The friend that gave them us had just received them from a friend going into the western country; had informed our friend that it was an apple of superior merit; indeed there was none better. We felt grateful for the acquisition, and as it was without name, at the suggestion of our friend, we gave it the

above name, as an ear mark, for the time being. Years rolled on, and at length our waiting eyes beheld the fruit; a small, one-sided, greenish white apple; as hard as a chip, and the juice pretty good vinegar, without the process of fermentation. We felt somewhat wrathy; called on our friend for an explanation, and he called on his worthy friend to explain, who having now come to the conclusion that "honesty is the best policy," confessed the whole truth of the matter. He had cut the scions from a bundle of trees which he found on the boat, not doubting but it would prove to be superior fruit. Nothing more than petit larceny.

Buffalo Nursery, Jan., 1846. B. HODGE.

CULTURE OF THE GRAPE.

THE GRAPE requires a deep friable soil, and an exposure in accordance to the class to which it belongs, the foreign varieties alone requiring a particularly warm location. No fruit will admit of such plentiful manurings as this, provided it be properly applied, and the produce of fruit will be thereby immensely increased, and those who say the development produced is in wood without fruit evince great ignorance. Decomposed vegetable or animal manures, and above all the blood of cattle from the butcher's stall, plentifully and frequently mingled with the earth at a short distance from the main stalk of the vine, will cause a degree of vigor and productiveness that will astonish all who have not witnessed their effects. In regard to pruning, the American varieties simply require such thinning out during the winter, as is necessary to prevent the branches injuring each other by contact, and the removal of such weak spurs as are immature and imperfect; but no fear should be indulged that the vine, if in a good soil, is not capable of maturing its fruit on any extent of branches it may naturally produce, as among the most productive vines found in Carolina, there are many instances where a single vine covers an acre. Summer pruning is only called for in locations where the vines are confined in too narrow limits, and then but very partially, as any considerable pruning will cause the fruit to turn black and fall off, and even cutting off the leaves will prevent the maturity of the fruit, as they are the conductors of the essential nutriment from the atmosphere to the fruit and to the whole plant. The foreign varieties, being natives of a much milder climate, require considerable prunings, and but a moderate proportion of the vigorous shoots should be allowed to remain, it being necessary in this case to substitute skill and artifical culture in order to remedy the inappropriateness of climate. The most delicate foreign varieties do not succeed in this latitude except under glass, but in that way they ripen well and are exceedingly productive. WM. R. PRINCE.

FLAX

IT is a matter of surprise to me that gentlemen of enterprise and capital, do not engage more extensively in the manufacture of fabrics from this article. Large quantities are annually raised in this (Seneca) county exclusively for the seed. The straw, after the seed is thrashed out, is left to lie and rot in the fields; but little or no account is made of it as a manure. The yield of seed is from eight to twelve bushels per acre, and the price is generally one dollar per bushel, which must be a poor compensation, considering it is so heavy a drain upon the fertility of the soil; but could they obtain an equal additional amount for the stalk, the crop might be a profitable one. Numerous articles, such as twine, cordage, ropes, bagging, ticking, sacking, and various kinds of cloth for summer clothing, might be manufactured from flax, which would wear twice as long as cotton; besides it would be helping the farmers in their immediate vicinity, who in return would help the manufacturer. ASON SMITH.

Tyre, Dec. 31st, 1845.

CHITTENDEN COUNTY (VT.) AG. SOCIETY.

THE directors of this society have offered 325 premiums, and appropriated for the payment of them about $750.00. They have adopted a new feature in the award of premiums—that no one man shall receive more than one premium on the same class of animals or articles presented—but if entitled to a second premium in the class, he shall have a certificate or diploma to that effect, stating and setting forth the fact—but the premium shall be paid to the man who presents the next best articles or animals in the same class. This will render the competition much more active, and a far greater variety will be presented. The premiums also will be much more widely scattered over the county, and cannot be concentrated in a few hands.

Another new and most important of all measures is the offer of a premium to every member—in the gift of a copy of the "Agriculturist," or "The Cultivator," to any member who will receive it, on his paying $1 25 instead of $1, to the funds of the society—thus putting into the hands of every member, a paper richly worth one dollar, by his paying twenty-five cents extra to the society. Among the whole number now on our list, amounting to between 400 and 500, only 50 decline the offer; and most of these, not because they object to the plan, but because they have made previous arrangements for their agricultural reading.

Our number of members has been more than doubled, and we hope still very much to increase the list before our show, on the first day of October next. As we get our papers at a reduced price, our funds for premiums are rather increased than diminished by the operation of this plan, which meets with favor everywhere. Would not this be a noble plan, in its practical effects, to be adopted throughout the land, by every agricultural organization?

L. G. BINGHAM,
Pres't C. C. Ag. Society.

Williston, Vt., March 13, 1846.

Accompanying the above, we received the Society's Prize List for 1846. The premiums are all paid in cash, and though small, are so arranged as to draw out an extensive competition; and we shall be surprised if the spirit awakened by the engergetic and judicious efforts of this society does not draw together a larger collection of the farmers of the Green Mountain State at its next exhibition, than has ever before been convened for any useful purpose. Its premiums consist of 16 on horses, 40 on cattle, 65 on sheep and wool, 9 on swine, 34 on field crops, 32 on horticulture, 28 on farm implements, and 107 on household and other manufactures.

SELF-ACTING PUMP.

In our last volume, pages 245 and 246, we published a communication in reference to this pump, from the inventor, Mr. ERASTUS W. ELLSWORTH. Since then we have received frequent inquiries in regard to the operation, &c. The following interesting extract from a letter received sometime since from Mr. ERASTUS ELLSWORTH, the father of the inventor, would have appeared before, but it was unfortunately mislaid. It will be noticed that the invention has *proved* itself all it has heretofore been represented to be. The well known character of the Messrs. ELLSWORTH justifies the most implicit reliance on their statement:

"Mr. Howard will no doubt be gratified to learn, that the Self-acting Pump, which he saw in operation in my door yard last summer, has not failed, but for a day when it was interrupted by accident, to perform its task to raise all the water which the well furnishes. It now supplies water for twenty head of cattle daily.

"To test its power to elevate water above its station, a lead pipe was attached to the discharge pipe, and carried to the top of the barn near by, and raised to the height of *forty-nine feet*, above the water in the well. At that height it played a jet of about *four feet higher*, evincing a power much greater than had been anticipated. Indeed, the invention has more than met the most sanguine expectations regarding it."

COLMAN'S EUROPEAN AGRICULTURE—PART V.

In matters of a practical nature, this number is, as we have before intimated, decidedly superior to any that has preceded it.

Mr. Colman proposes to arrange his observations under three great divisions, to wit: arable farming; breeding and grazing; and dairying. He does not intend, however, to give "specific and exact directions in detail for the cultivation of every crop, and for every department of farm management." * * * "My principal object," he observes, "is to point out in European agriculture such circumstances of difference between it and our own as may serve for the improvement of the agriculture of the United States, and to give such an account of the modes of management which prevail abroad, and which have been sanctioned by long practice and experience, as may facilitate their adoption, as far as the circumstances existing among us would render their adoption eligible." He admits that every country must practice modes in some degree peculiar to itself, owing to the variation of climate, facility for procuring manures, price of labor, value of products, &c. "At the same time," says Mr. C., "the general principles of agricultural practice are everywhere the same; and these with the various modifications which they may be expected to assume under different degrees of civilization, or different degrees of improvement in sciences and the arts, and their general and special application cannot be too fully discussed and illustrated." * * * "We may learn much from those who cultivate better, and from those who do not cultivate so well as ourselves. There is little hope in anything so far as great improvement is concerned, for the man who implicitly follows any guide whatever. He must exercise his own reason, experience, observation, and judgment, in the application of rules which may be laid down for his direction."

The Soil.—Under this head it is remarked that "the farmer's whole business so far as cultivation is concerned, lies with the soil; and upon the soil, and the skill and intelligence with which he manages it, must depend his success." Mr. Colman does not assent to the position of "some scientific persons that the principal, if not the only use of soil is for the support of the plant, and that the food of the plant is derived wholly from the atmosphere." Yet, in conclusion, he says—"that plants receive a large portion of their nourishment from the air, does not admit of a doubt." He does not allow much credit to the "notion that plants receive a large portion of their nourishment through their leaves." As before remarked, however, he admits that the atmosphere contributes essentially to vegetation, but, he says,—"so far as any practical use whatever is to be made of the fact, we must consider this nourishment as received through the roots, and consequently through the medium of the soil in which these roots spread themselves, and the manures by which it is enriched. The soil, therefore, as the basis of all vegetation, is the great object of the farmer's consideration."

THEORIES OF THE OPERATION OF THE SOIL.—The subject of this chapter gives occasion to speak of chemical analysis, to which reference has been made in a preceding number. He remarks—"The common properties of soil may be distinguished by the eye or the feel, with persons of experience and practical observation; but chemical examination may often be of the highest importance in detecting the presence of some mineral ingredient, by which the cultivation of particular crops may be hindered or wholly prevented." * * * "What portion of the soil is abstracted for vegetable food is not yet determined; and it is a singular fact that though analytical chemistry has demonstrated that certain mineral substances are taken up in the organism of plants, and are essential in composing their structure, and has proceeded to calculate the actual amount in pounds' weight abstracted by the growth of crops of a particular quantity, it has never yet, by an analysis of the soil before the planting, and as exact an examination after the crop has been removed, determined the loss in such case. Why this has not been done, or whether it be beyond the power of chemical analysis to accomplish,—extraordinary as is the degree of perfection to which the science has been advanced, must be left to others to answer."

The theory of Decandolle, in regard to the exudations or excrementitious matter of plants, by which the soil was supposed to be unfitted for the production of the same species, Mr. Colman thinks is now generally abandoned. But the necessity and advantage of a rotation of crops, is fully admitted both by practical and scientific men, and there seems to be no doubt that a particular crop exhausts the soil of certain elements essential to its production; but adds Mr. C., "it would be extremely interesting if the fact of such exhaustion, and its extent, could be more particularly determined by a chemical examination of the soil which has been cultivated."

Mr. Colman alludes to the theory of Liebig, that the mineral ingredients which are found in the ashes of plants, and which are carried off when the products are removed, require to be returned either artificially or naturally—"that the land being suffered to rest, or applied to a different production, the ordinary influences of air and moisture in decomposing the rocks of the soil, will renew the supply of these mineral elements which have been removed." He thinks that the experiments to which this has led, and which are now going on, must shortly determine this matter, and greatly simplify the processes of agriculture.

To show that the advantages of chemical analysis may be overrated, a quotation is given from the noted chemist, Boussingault: "Chemists of great talent," (says Boussingault,) "have made many complete analyses of soils noted for their fertility; still, practical agriculture has hitherto derived very slender benefits from labors of this kind. The reason of this is very simple; the qualities which we esteem in a workable soil depend almost exclusively upon the mechanical mixture of its elements; we are much less interested in its chemical composition than in this; so that simple washing which shows the relations between the sand and the clay, tells of itself, much more that is important to us, than an elaborate chemical analysis."

In regard to the proportion of lime which is essential to the fertility of soils for various crops, Mr. Colman refers both to Boussingault and Von Thaer, and also to an experiment of Payen, to show that that point is not yet settled. In one of the extracts given from Von Thaer, it is stated that the richest *argillaceous* soil that he ever analyzed, was taken from the bank of Elbe. Of one hundred parts, four and a half were lime. This soil it was said, "was made to bear the richest crops, as cabbages, wheat, autumnal corn, beans, &c., but every sixth year it was necessary to manure it thoroughly and give it a fallow." In another statement of Von Thaer's referred to, he says—"The richest land I ever analyzed, and which was taken from the marshes of the Oder, contained 19¾ parts in 100 of humus, 70 of clay, a little fine sand, and *an almost imperceptible quantity* of lime."

Mr. C. next quotes from Boussingault, who cites the analysis of "one of the most fertile soils iu the world," to show that the proportion of lime, if indeed its presence is actually required in the soil, is much smaller than some have thought essential. The analysis referred to is that of the soil of Tchornoizem, which embraces an extensive district in Russia. It is stated to have been the opinion of Mr. Murchison, that this land "is a submarine deposite formed by the accumulation of sands rich in organic matters. It is (says Boussingault) the best soil in Russia for wheat and pasturage." The analysis was made by M. Payen, who found the soil to contain—

Organic matter,.....	6.95
(containing 2.45 per cent of azote.)	
Silica,.....	71.56
Alumina,.....	11.40
Oxide of Iron,.....	5.62
Lime,.....	0.80
Magnesia,.....	1.22

Alkaline chlorides,.....	1.21
Phosphoric acid, a trace.	
Loss,.....	1.24
	100.00"

In relation to the above facts, Mr. Colman remarks—"It is a little remarkable, judging from the analysis here given, that not only is the quantity of lime extremely minute, but even the phosphates, deemed so essential and indispensible to success, are also absent."

Mr. Colman declares, that though he is desirous of encouraging scientific investigations, the known results of which he cannot but admire, yet he deems it proper to exercise caution in our assumptions. "We are very apt," he says, "to exclaim in the extacy of the Grecian philosopher in the successful investigation of an interesting problem, 'I have found out! I have found out!' when, with all the apparent and flattering loosening of the strings, the gordian knot remains as firm as ever. The processes of nature must all be simple enough to the Great Mind which established them, but that is not the human mind. To compare a rush light to the sun, would fall infinitely short of expressing the difference between them."

(To be continued)

THE POTATO DISEASE.

MR. TUCKER—I am much pleased with the "established facts" presented by Professors Kane, Lindley, and Playfair, in their report on the potato disease in Ireland, as stated by you in the March number of your valuable periodical. And believing that they are correct, and that they will greatly subserve the cause of humanity, and that all possible light upon this subject is desirable, I am led to inquire how they arrive at their conclusions. 1st. Why do "they suggest its connection with the cold, cloudy, ungenial weather of the past season" in Ireland, unless, being atmospherical, it affects the *unripe* vines in that kind of weather?

2d. Why do they conclude that "the potato is not affected in a warm, dry, sunny country," unless by admitting that the vines are only exposed in a cold, ungenial climate?

3d. How do they conclude that "potatoes planted early in the season are more healthy than those planted later," except by admitting that the vines of late unripe potatoes are more exposed to the disease?

4th. Why is it that "the crop has suffered less in dry, elevated, sandy districts," unless "the natural warmth of the soil" matures the potatoes before the time of the appearance of the disease, or rather, prevents its appearance?

5th. How is it that "late varieties are more affected than early ones," unless by being exposed while immature, to the disease in "cold, cloudy, ungenial weather?"

6th. How do "they disprove the opinion that the disease affects old varieties more than new," but by admitting that it affects all varieties when the vines are in a state to receive it?

Thus the "established facts" of these eminent professors confirm the suggestion, in another page of the same number, to plant all varieties as early as possible, thus anticipating the fall disease. And we are happy in stating that there is, in this region, a general determination to do this the coming season. K. HAVEN.

Shoreham, Vt., March 12, 1846.

ASHES.

FEW farmers know or appreciate the value of this article as a manure. Applied to the young corn crop, they are worth at least one shilling per bushel, while our *ash carts* are gathering them up in exchange for trinkets, which do not nett the farmer more than six cents per bushel. How long will it be before the farmer will awake to his own interest?

JASON SMITH.

BARLEY AND FLAX GROWN TOGETHER.

L. TUCKER, ESQ.—Mr. George W. Baker put into my hands, the other day, the February number of your paper, the "Cultivator," in which was inserted on page 57 a piece written by G. W. B. on the subject of my raising barley and flax together. Mr. Baker did not receive his information from me, and is therefore, in some respects, erroneous as to matters of fact. I hasten to correct the errors. It did not occur to me last spring to try the experiment of sowing barley and flax together, till I had sowed all but one acre. I then bought me one bushel of flax-seed, and on the acre which I had not sowed, I put on three bushels of barley, and from six to seven quarts of flax-seed mixed together, and sowed the remainder of the bushel of flax-seed on a number of acres more, even when the grain had come up and let it take its own course, without dragging. I had $15 worth of flax-seed from the bushel sowing; as to the acre in question, I judged that I had fifty bushels of barley and about six bushels flax-seed. My crop was all harvested together, therefore cannot be so particular, but the farmer who wishes can learn by experiment. One idea I will add, that if farmers will sow about five or six quarts of flax-seed to the acre with their oats for horse feed, they will not need to visit tamarack swamps to obtain medicine for horses; all will be right in a cheaper way. In cleaning up the grain, if you wish to keep the flax-seed with the grain, a thin board must be substituted for the lower sieve in the fanning-mill, otherwise the flax-seed will be left in the tail-box. GAIUS STEBBINS

Lebanon, March 13, 1846.

SAMPLES OF WOOL, &C.

WE have received from Mr. THOMAS NOBLE, of Massillon, Ohio, some thirty samples of wool. With the exception of samples from four bucks purchased in the fall of 1844, of the Saxon stock imported by the late H. D. GROVE, the specimens sent are all from a stock which Mr. Noble has kept for several years, and which were originally derived mostly from the stock of Messrs. Dickinson & Wells, late of Steubenville, Ohio. On examining and comparing the samples, we agree with Mr. Noble, that "there is no necessity of going to Saxony for fine wooled sheep." In relation to his flock, Mr. Noble says—"I began the winter with 1,600 head, and though our feed was very scanty in consequence of the unfavorableness of last season, yet they are in fine order, and there has not been one death. When the summer comes around, should you wish it, I will give you the cost of keeping per head, the deaths per cent, the per centage of lambs raised, the quantity of wool sheared by each sheep, the selling price of the same, &c.

"I shipped my last year's crop of wool to Liverpool, but it did not answer my expectations. The home market is best.

"I am about establishing a flock of sheep on the prairies of Illinois. I sent out 900 (850 ewes and 50 wethers) last summer. So far they have done well, and if the experiment succeeds it is my intention to make it a large flock—say 10,000."

We should be pleased to receive Mr. Noble's account of the produce of his flock, &c. and hope he will furnish it.

THE WHEAT CROP.

Mr. Noble says—"Wheat so far looks well. I sow nearly all mine with a *drill*, believing it much the best plan. I had a machine made which sows six rows at once, and is a very efficient article."

ARTICHOKES.

Mr. Noble has for several years cultivated artichokes, and he says—"I am this season more than ever convinced of their great value. While every other crop was nearly destroyed by the ungenial season, [drouth] they were but little affected."

SILK CULTURE.

We learn that at a late meeting of the American Agricultural Association, Col. Clark read a valuable paper on the subject of the production of silk in the United States. He argued that the advantages of cultivating silk in Europe and this country are altogether in our favor. Here the hatching of eggs is done by the spring season—in Europe it was only accomplished by artificial heat. The time of feeding in this country is 31 days—in Europe 45. The expense of preparations, &c. is much less in this country than in Europe. There every thing has to be done under cover—here the worms succeed best with shelter just sufficient to protect them from the hot sun, and the rains. At the same meeting, Mr. Van Epps, who it is said, has lately become director to the largest silk establishment this side the Alleghanies, made some remarks showing that the progress of the silk-culture in the United States has been more rapid than is generally supposed. According to the *Tribune*, he stated in 1840 there were raised in Maine 211 lbs. of cocoons; 1844, 815; and in the following States:

	1840.	1844.
New-Hampshire,	499	1,100
Vermont,	4,286	10,990
Massachusetts,	1,741	37,690
Rhode Island,	450	1,140
Connecticut,	17,538	176,210
New-York,	1,735	6,340
New-Jersey,	1,796	5,200
Pennsylvania,	47,262	33,110
Delaware,	4,158	458
Maryland,	1,290	8,530
Virginia,	3,191	7,720
North Carolina,	3,014	8,050
South Carolina,	2,080	6,930
Tennessee,	1,217	25,090
Kentucky,	737	5,810
Illinois,	1,154	4,250
Ohio,	4,417	31,500

Total in 1844, 333,277 lbs. equal to 30,000 bushels of cocoons, which would employ 25 reels for six months.

ORANGE CO. AG. SCHOOL.

We learn that several farmers of the town of Montgomery, Orange county, N. Y., have formed an association for the purpose of establishing a school under the name of "Orange County Scientific and Practical Institute." Mr. JAMES DARRACH has been engaged to furnish instruction by lectures and otherwise, in the natural sciences—particularly in vegetable and animal physiology, chemistry, &c.—showing their application to the purposes of the farmer. The different members constituting the association are each to receive a certain number of the pupils, whom they promise to instruct in "all the practical branches of agriculture and the manual operations of the same; and also to watch over their morals and habits, in the same manner that they would their own children, for their permanent good."

The practical knowledge which will thus be imparted to the pupils, can hardly fail to be important—they will be able to see how far the suggestions of the laboratory will be borne out by actual experiment. We annex the following extract from a private letter, on the subject of this school, received from F. J. BETTS, Esq., of Newburgh:

"Their system is in one respect, to me, quite new; and I should think would prove of great practical value. I refer to the provision for having the scholars board with the members of the institute, from whom they are to receive instruction in all of the practical duties of the art. Where, as in the case of this institute, the members are all intelligent practical farmers, who take such an interest in an improved state of agriculture as to enter into an association like this, and who stand pledged to carry out and test the accuracy and truth of the teachers' suggestions by actual careful experiments, it seems to me that the student will be more thoroughly taught than he could be by experiments upon a "*model farm*" and he will derive the still greater advantage of instruction in the *mysteries* of household *economy*. *Success* in agriculture must depend upon the economical use of the farmer's means, and the agricultural student who finds no place in his *course of study*, for economy as an essential part of his education, will find himself more of a theorist than a farmer, when his studies are concluded. In the practical farmer's family he will learn how to economise his time, his money, his manures, and in fine, all of his means."

We invite attention to the advertisement to be found in this number.

"COWOLOGY."

We have received several inquiries in relation to a Treatise on Milch Cows published in France by M. Francis Guenon, and a translation of which, by N. P. Trist, has appeared in the Farmer's Library.

It is claimed that this treatise "discloses infallible signs for determining the milking properties of Neat Cattle." By the aid of the knowledge imparted in this work, it is declared that "one may without fail discover, even in a calf of a few months old, whether it will make a good milker, and is, therefore, worthy of being reserved for the dairy."

The "infallible signs" alluded to, are certain curls (or "quirls") of the hair called "escutcheons." By a strict observance of the position and extent of these "natural marks," it is asserted that "the *quality* and *quantity* of milk which any cow will give, the *length* of *time* she will continue to give milk, &c., &c., may be *accurately* determined."

The treatise is accompanied by numerous diagrams illustrative of the "escutcheons," which, in the opinion of the author, indicate the precise qualities and value of the different classes of cows. The variation of the curls or escutcheons, have been made the basis of an arrangement by which all cows are embraced in eight several classes, each class having two sub-divisions. M. Guenon assumes to give the exact number of "litres" of milk which are yielded by cows of all these classes and divisions.

It is impossible to furnish such a description of the "escutcheons" as would afford the reader a definite idea of them, without the diagrams; and to copy these, might be deemed an infringement on the copy-right of the American publishers. Those therefore who wish to obtain a more particular knowledge of the work, are referred to the Farmer's Library. (See advertisement.)

We have but a word to say in reference to M. Guenon's "Discovery." It is known to every man of observation, that the quantity of milk or butter that may be afforded by any cow in a given time, depends so much on contingent circumstances, that "*accuracy*" in foretelling the qualities of cows must be out of the question. We have had no opportunity of ascertaining how far the application of M. Guenon's rules would show them entitled to consideration; but so long as the "quantity and quality of milk, and the length of time a cow will continue to give milk," are dependent on the nature and quantity of food, the temperature in which the animal is kept, her quietude, and the management, in all respects, to which she is subjected, we know that "natural signs" can be only *general*, not particular and "infallible" guides.

CHEESE DAIRYING IN WINTER.

Col. T. S. MEACHAM, of Pulaski, N. Y., called on us one day in February last, and informed us that he was then using the milk of 95 cows for making cheese. The making of cheese at this season of the year is an experiment not before tried, to Col. M's knowledge; but with his complete rooms and apparatus for warming and drying, he feels pretty confident of success. The milk, he thinks, is richer at this season than in summer, and will, he supposes, produce cheese of better quality. He is now, he informs us, erecting a spacious hall for curing his cheese, which when finished, will be 150 feet long and 18 feet in width. Col. M's farm consists of

about 1,000 acres, 500 of which, he states, are in grass. He keeps 120 head of cattle, 97 of which are cows. He made last year 30,000 pounds of cheese, 20,000 lbs. of which he sent to New-York at one time and sold for 6½ to 7 cents per lb. He feeds his cows mostly on hay and carrots—2,000 bushels of the latter have been grown on his farm last year. He prefers giving each cow a half bushel of carrots per day. He saved from his grass grounds last year, 300 bushels of grass-seed.

GARDEN OPERATIONS FOR APRIL.

"Spring! the year's youth, fair mother of new flowers,
New leaves, new loves, drawn by the winged hours,
Thou art returned."

THIS month opens to us a busy season for Gardening Operations. In the month of April, we have frequently very delightful summer-like days, which cause the buds to expand, as it were, by magic; and every fine sunny day, accelerates the progress of vegetation, and is extremely apt to remind us of the beauties of Flora. Now, as there is a peculiar pleasure in viewing rare and beautiful flowers implanted in the breasts of most of us, so is there in others also a love of cultivating them, and "training them up in the way they should *grow*."

The beginning of this month is the proper time to commence work in the garden. Let every border and flower bed be dug and neatly raked. If there is an edging of box, it should be neatly trimmed; box edgings may still be planted if this work has not been attended to last month, which is the proper time. The month of April is peculiarly suitable for propagating by cuttings. This month is considered the best for planting out *Evergreens*, but shrubs of all kinds and herbaceous plants may be transplanted in all this month. Give Dahlias a gentle heat in the hot bed, or bring them forward in pots or boxes in the house, to induce the breaking and shooting of the buds, each of which, cut off with a portion of the tuber, will become a plant. Flower-seeds may now be sown, the tender kinds not until the last of the month. Plants in green-houses or parlors must now have constant air; want of a free circulation of air will cause the plants to spindle up, and flower weakly. Such plants as require now more room may be shifted into larger pots, and kept shaded for a few days until they have taken fresh root. All other plants or shrubs in pots should have fresh mould added to the surface; remove dead twigs and leaves, and give moderate waterings occasionally. Grafting may still be performed. Repair the compost, or clay, of former grafts, if it be cracked or injured. Search for and destroy caterpillar's nests, and exterminate insects of every description. But let us return to the flower garden.

The beds still look gay with the bulbs that were in flower last month; but these will soon disappear, and be succeeded by the fragrance and beauty of the Hyacinth and Narcissus. The varieties of this last named bulb, are quite numerous; the Incomparable is the hardiest, and produces its bright yellow flowers the beginning of this month. This variety is the well known *pasche*, or *pans* flower.

Of the Hyacinth, there are some hundred varieties, embracing a great variety of colors; their hardiness and earliness of flower, offer a strong inducement to all lovers of Flora to cultivate them. They are of every shade of white, yellow, pink, red, crimson, purple and blue; they produce their deliciously flagrant flowers early in the month, and the different varieties continue in bloom four or five weeks. Next in order we have the Tulip. The Tulip wants nothing but an agreeable prefume to render it the finest flower in the world. There are endless varieties of it totally differing from each other, some of them blossoming from the last of this month to the middle of the next. For brilliancy of tint, and combination of all the different colors, the Tulip surpasses all other plants of the garden.

Of the Herbaceous plants now in flower, we have "The Polyanthus broad, with golden eye;" this is an early blower; one of the first flowers which announces spring:

"Fair handed Spring unbosoms every grace;
Throws out the snow-drop and the crocus first;
The daisy, primrose, violet, darkly blue,
And *polyanthus* of unnumbered dyes."

The double white and blue European Violets are now in bloom. The flower is delightfully fragrant, but of short duration:

"The trembling violet, which eyes
The sun but once, and unrepining dies."

Then we have the thick leaved Saxifrage with its purple flowers; the stem changes every year into root. The foliage of this species is very handsome.

The Ornamental Flowering Shrubs contribute but little to the embellishment of the garden. Of the few in blossom, we may enumerate the *Corchorus;* although a native of Japan, it is one of the hardiest shrubs we have; it displays its bright yet low double blossoms towards the last of the month in the greatest profusion, and continues in flower until autumn. The Leatherwood is a pretty shrub; the flowers are yellow, and appear before the leaves. It has the appearance of a large tree in miniature. Of the Missouri Currant, there are two varieties, both flowering very profusely towards the last of the month. P.

NOTE.—In my last communication, in the quotation, "Though lifeless," &c.—for inverting; read, "*investing* every spray."

Westchester Co., March 14th, 1846.

FINE WOOLED SHEEP IN CHITTENDEN CO. VT.

WITHIN the past two years quite a number of the farmers of Chittenden county, Vermont, have established, on a larger or smaller scale, fine flocks of sheep, mostly Merinoes. These sheep are now found in Charlotte, Hinesburgh, Williston, Colchester, Shelburn, and elsewhere in the county. In Colchester and Williston are to be found Saxons, and in other places grade Saxons and grade Merinoes all over the county. In Williston is now to be found the entire flock of Rambouillet Merinoes, formerly belonging to D. C. Collins, Esq., of Hartford, Ct. They are now owned by L. G. Bingham They are a splendid and magnificent variety of pure Merinoes, imported in 1840. Mr. Collins has never sold a full blood ewe until he sold the flock to Mr. Bingham. Four of the imported ewes are still alive. Some have been destroyed while in the hands of Mr. Collins. All are pure descendants from the imported ewes and old Grandee. All other Rambouillets in the country—ewes—are grades, being produced by a cross of the pure Rambouillet Buck with the American Merino ewe.

A few days since Merrill Bingham, Esq., of Cornwall, Vt., sold 110 full blood ewes to go to Williston, to lay the foundation of two new flocks.

No better sheep can be found in Vermont than can now be found in this county; and some folks are beginning to colonise in order to establish other flocks. We hope to see the time when we can offer to the wool growing public as great inducements to come here to buy wool or sheep, as can be offered by any county in the State.

I presume you will hear more of the 110 ewes spoken of above about shearing time. They were purchased by Messrs. J. G. Chittenden, Thomas H. Canfield and L. G. Bingham. IOTA.

COAL TAR FOR SEED CORN.

MR. EDITOR—It may be of service to some of your readers to know that crows will not eat, or scratch up, corn that has been saturated with coal tar. It does not prevent vegetation as the common pine tar does; is much less trouble to put on, and half a pint is sufficient to saturate a bushel if poured over it and well stirred. It may be well to say, that coal tar can be obtained in any of the cities, and is made at the gas works, and is most excellent to preserve out side wood work. Bryerfield, near Hampton, Va., February 16th, 1846.

A. B. M'CLEAN.

THE CULTIVATOR.

ALBANY, APRIL, 1846.

TO CORRESPONDENTS.

COMMUNICATIONS have been received, since our last, from F. A. Wier, Horace Goodhue, A. B. M'Clean, F. Gillespie, C. Bryant, K., Wayne, F. Roys, A Subscriber, Exordium, Richmond, Wm. Ansley, J. P., R. B., B., D. Rounds, W. H. T., J. M. Weeks, J. Sherman, Wm. Byers. S. S. G , J. T. Grant, H., Rev. H. W. Beecher, K. Haven, Zea, Iota, Inquirer, James Jones, E. C. F., Gaius Stebbins, John Rankin, Wm. Bacon, G., G. P. Waldo, C. Easton, A Subscriber, J. S. Pettibone, C. E. M'C., J. J. King, Germanicus, G. D. W. Elwood, A. H. Halleck, S. N. Hawes.

BOOKS, PAMPHLETS, &c. have been received as follows, since our last:

Notes on the Iroquois, or Contributions to the Statistics, Aboriginal History, Antiquities and General Ethnology of Western New-York. By Henry R. Schoolcraft. From C. VAN BENTHUYSEN & Co.

The American Journal of Science and Arts. By Prof. Silliman, B. Silliman, Jr., and James D. Dana. No. 2, for March, 1846. New Haven, tri-monthly, $ 5 a year. From the Editors.

Vergennes Vermonter. From S. W. JEWETT, Esq.

Transactions of the Ag. Society of New-Castle county, Delaware. From J. JONES, Esq.

Proceedings of Clinton County (N. Y.) Ag. Society. From WILLETS KEESE.

The New-York Dissector, a quarterly Journal of Medicine, Surgery, Magnetism, Mesmerism, and the collateral sciences; with the mysteries and fallacies of the Faculty. New-York—H. H. SHERWOOD, M. D. 56 p. octavo, $1 a year.

Address before the Ontario Ag. Society. By Z. BARTON STOUT, Esq. From the Author.

Address at the Fair of the Hamilton County (O.) Ag. Society. By the President, J. W. Caldwell, Esq. Unknown.

Constitution, By-Laws, &c. of the Westchester Ag. and Hort. Society.

Belcher's Nova Scotia Farmers' Almanac, for 1846. From the Author.

Schedule of Premiums offered by the Massachusetts' Hort. Society, for 1846. The list is as follows:

For Designs and Decorations,.....	$200 00
" Fruits, ...	500 00
" Plants and Flowers,.....	500 00
" Vegetables, ...	150 00
	$1,350 00

Vermont Mercury, with an article on Wool Growing, by J. W. Colburn. J. S. PETTIBONE.

Three numbers New-York Evening Post, with articles on the prices of wheat on the continent of Europe, and on "the weather."

The Morning Telegraph, with notices on Farmers' Clubs.

Proceedings of the National Convention of Farmers, &c. held at New-York, in connection with the Fair of the American Institute, 1845.

THE FARMER'S DICTIONARY, a vocabulary of the technical terms recently introduced into Agriculture and Horticulture from various sciences, and also a Compendium of Practical Farming; the latter chiefly from the works of Rham, Loudon, Low, and Youatt, and the most eminent American Authors, with numerous illustrations. Edited by D. P. Gardner, M. D. Harper and Brothers, New-York. [Notice next month.]

"P."—Thanks for your suggestion. We shall endeavor to accomplish the object you suggest.

MONTHLY NOTICES.

FRUITS AND FRUIT TREES OF AMERICA.—We are glad to see a sixth edition of this last work of Mr. DOWNING, announced as just issued from the press. No better evidence of the estimation placed upon it by the public, need be desired, than that which is afforded by the rapidity with which successive editions of it have been called for. That Mr. D. has accomplished a work requiring immense labor and the most minute research, with great credit to himself and to his country, will not, we think, be denied by any candid and impartial judge, and we are gratified to learn that he is reaping the reward so justly due to his labors.

NEW KIND OF WHEAT.—J. V. E. VEDDER, Esq., of Geneva, has brought to our notice a new kind of wheat which seems to possess superior qualities. Its origin, in Mr. V's hands, was a few kernels which were lost from a package in passing through the post-office at Geneva. Mr. VERPLANCK of that town sowed these few kernels and saved the produce. Last year, the quantity of seed was 13 lbs. and 12 oz. This was equally divided between Mr. Verplanck and Mr. Vedder. Mr. V. produced from his part (6 lbs. 14 oz.) *four bushels and one peck*, by measure, weighing 64 lbs. per bushel. It is of very superior appearance—the kernels large, white, and the skin very thin. The heads are of uncommon length—some of them seven inches. The whole length of the stalk, including head, is in some instances, over five feet.

NEW KIND OF PEAS.—Mr. WM. MERRIFIELD has left us a sample of peas which are quite different in their appearance from any we have before seen. They are said to be proof against the pea-bug or weevil which is often so destructive to peas. They were entirely free from the insects last season, though other kinds cultivated by Mr. Merrifield were attacked as usual. They are said also to be very prolific. We understand they were lately brought from Germany.

FINE MUTTON.—We acknowledge the reception of a saddle of superior mutton, from Mr. J. M'D. M'INTYRE, of this city. It was from a half Cotswold and half South Down wether, only 22 months old; yet the saddle weighed 42¼ pounds. We have tried the quality of this mutton, and find it excellent. If mutton of this quality could be generally produced, we cannot doubt that it would be preferred, by most people, to any other meat—while at the same time it could be produced at much less cost. Mr. M'INTYRE breeds both the Cotswold and South Down sheep, pure, and is in the habit of fattening wethers of both these breeds. Last season he sent forty-two to Boston, which sold at nine cents per pound dead weight. He has just sent over twenty more, which sold at the same price of the former. The two lots averaged from 25 to 30 pounds per quarter.

SWEET AND SOUR APPLES.—Mr. J. E. ELLIOTT, of Clinton, N. Y., has sent us several apples of the kind usually called sweet and sour. In those sent, the divisions between the sweet and sour portions, are very distinctly marked by external ridges. The proportion of the sweet and sour parts, varies in different apples. In many cases, there are alternate strips or divisions, each distinctly sweet or sour, over the whole apple—there being sometimes four or more of these divisions. We have several times seen this kind of apple before, it having first been brought to our notice at least twenty-five years since. But we have never seen or heard of but one kind having these peculiar qualities. The sour part is in appearance and taste a Rhode-Island Greening—in fact the apple would at first sight be taken for a genuine Greening, and were it not for the sweet portions, they would be considered identical.

MUNIFICENT OFFER.—At a late meeting of the American Agricultural Association at New-York, R. L. Pell, Esq., stated that GARDNER G. HOWLAND, Esq., had offered the use of his fine farm of 300 acres, at Flushing, Long Island, with all its cattle and implements, for five years, to be used as an experimental farm and such other purposes as might be desired by

the society. This, it is said, will render any aid from the Legislature, for the establishment of an agricultural institution, by that association, unnecessary.

SEED PLANTER.—We would call the attention of those wanting an implement of this kind, to the advertisement of LEWIS' Planter in this number. A cut and description of this machine will be found in our volume for 1844, page 199. We shall furnish a more particular description hereafter.

☞ In Mr. WEEK's Report on crops, on another page of this number, he speaks of the "male and female blossoms," of wheat and other grain. It may not be amiss to remark that the male and female organs of wheat are in the same flower; hence there are no "male and female *blossoms*."

INTRODUCTION OF THE ALPACA INTO THE U. S.—An association has been formed in New-York for the purpose of importing from Peru the alpaca. Several thousand dollars have been raised and a committee appointed to carry the object into effect. Among the contributors to the fund we notice the names of D. D. Campbell, of Schenectady, who gave $600. Mr. Sheaf, of New-York, $600, and Dr. Wm. Terrell, of Georgia, $300. An agent is to be sent out this spring, who is expected to return with the alpacas in the course of eighteen months.

RENSSELAER INSTITUTE.—The next term of this Institute, will commence on the first Wednesday in May next. The advertisement, which was crowded out of this number, will appear in our next.

CORN CROP IN TENNESSEE.—A subscriber, near Dresden, informs us that he cultivates about sixty acres of Indian corn, and his crop averages about forty bushels per acre.

FOREIGN.

By the Hibernia, which arrived at Boston on the 20th of March, we have English papers to March 2d. They contain but little intelligence of value in an agricultural view. The corn and provision trade is very dull, owing to the unsettled condition of the British tariff, and there is no prospect of material improvement until that subject has been disposed of by Parliament. Sir Robert Peel's proposition, as mentioned in our last, will probably go into effect. The House of Commons had agreed, by a majority of 97, to go into a consideration of it. This is considered equivalent to the passage of the bill by the Commons, and the opinion is generally expressed that it will pass the House of Lords by a small majority. The past winter in England and Ireland was remarkable for its mildness. Considerabie suffering has already been experienced in Ireland in consequence of the "potato disease," and much alarm is excited in various quarters from this calamity.

CHEROKEE ROSE FOR HEDGES.

MR. AFFLECK, in the N. Orleans Commercial Times, recommends the Cherokee Rose for hedges. He states, that it has already been fully tried in Adams and Wilkinson counties, Miss., where, to use his own language, —"there are scores of plantations completely and most effectually fenced in with this plant. No animal, whatever," he continues, "larger than a rabbit—and he must creep cautiously—can pass under or through it, after the fourth or fifth year, if it has been reasonably well attended to. It will even confine the negroes to the plantation, or at least compel them to find egress at the gates. It forms a beautiful feature in the landscape, with its rich glossy green leaves, summer and winter—and in the early spring is eminently beautiful, with its long pendulous wreaths of the whitest of all roses."

In regard to cultivation, Mr. A. directs to break up the ground—"open a deep, wide furrow, and fill it with rich compost—throw a couple of furrows back and harrow effectually. At every 2½ feet distance, open a hole with the spade, set in two or three, replace the earth, press it down with the foot, and the work of planting is done. Tend as you would a row of corn or cotton. The cuttings should be fifteen inches long, made from the shoots of last year's growth—the stouter the better. They must be put *fully two-thirds of their length* in the ground."

Mr. A. states that four years with good care is sufficient to make a perfect fence. Whether this plant would suit the climate of this latitude, we are unable to say; if any have tried it at the north, we should be glad to know the results.

THE CLUSTER PEA.

Mr. JOHN D. SPINNER, of Herkimer, writes as follows: "We have a new kind of pea with us. A neighbor sowed three bushels, and the yield was 120 bushels. He calls them the cluster pea. They are said to have been imported from some of the old counties. It is said there are from 30 to 60 pods on a vine."

FARMER'S SALES.

N. C. DAVIS, of Lunenburg, Mass., suggests that for the purpose of facilitating sales—"the farmers of each town establish an Advertising Box, (perhaps similar to those used in some towns for posting town warrants, &c., only as much larger as the occasion may require,) in some public place in the centre village, where each farmer can make use of it by paying the small sum of ninepence or a shilling a year, which would doubtless pay the expense of making the box and taking care of it." In this box he proposes should be advertised whatever the farmer wishes to dispose of. He thinks—"if every subscriber to the Cultivator would appropriate the small sum of twelve and a half cents for the above purpose, it would amount to enough in almost any town to bring this plan into operation." The plan appears feasible, and would, if adopted, doubtless save much time and trouble.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, March 23, 1846.

COTTON—Upland and Florida, per lb., 6⅞ to 8¾a9c.—New Orleans and Mobile, 7 to 9¾a10½c.
BUTTER—Western dairy, per lb., 12½a14c.—Goshen, 16a 18c.
CHEESE—Per lb., 7½a8½c.
FLOUR—Genesee, per bbl, $5 50—Baltimore, Howard-street, $5.12½a $5.25—Richmond City Mills, $6.50.
GRAIN—Wheat, Genesee, per bushel, $1.20a$1.25—Rye, 82a 85c.—Corn, 56 lbs., 67a70c.—Barley, 64.
HEMP—Russia, clean per ton, $210—American dew-rotted, $80a$100—water-rotted, $130a$180—Manilla $150.
HAMS—Smoked per lb.. 7½a8¾ cts.
BEEF—mess, per bbl., $8a$8.25.
LARD—6¾a7c. per lb.
PORK—Mess, per bbl., $11a$11.50—Prime, $9.50.
TOBACCO—Kentucky, per lb., 2¾a7c.

WOOL—(Boston prices.) March 18:

Prime or Saxony fleeces, washed per lb.....	40a41	cts.
American full blood fleeces,.....	37a38	"
" three-fourths blood fleeces,.....	32a33	"
" half blood do	30a31	"
" one-fourth blood and common,....	27a29	"

LANGDON'S HORSE-HOE OR CULTIVATOR PLOW.

THIS useful and highly valuable article may be had of E. Comstock & Co., at the Albany Ag. Warehouse, 23 Dean-st. Two sizes—one for $7, and the other for $6.

LEWIS' SEED PLANTER,

Manufactured by E. Comstock & Co., Albany Ag. Warehouse.

THE above drill with several valuable improvements, making it beyond all question the best in use, will be ready for delivery early in April. In this drill are combined the qualities of the ordinary machines, enabling it to plant all the small seeds, together with carrots, parsnips, beets, peas, corn, beans, cotton, hemp, and indeed nearly all crops grown in drills. It is simple, and not likely to require repairs for a great length of time. It may be drawn by a horse, or (as it runs easy,) may be operated by one man, or he may have the aid of a boy for using in a garden or for short rows. Retail price $12.00. To dealers a liberal discount will be made. E. COMSTOCK & Co.

April 1

NEW SEED AND IMPLEMENT WAREHOUSE.

Genesee Seed Store and Agricultural Warehouse, No. 10, Front-Street, Rochester, N. Y.

THE subscribers respectfully announce to the public, that they have opened the above establishment for the sale of GARDEN, FIELD, and FLOWER SEEDS, of all sorts,--*Agricultural and Horticultural Implements, Machines, &c. &c.*

They intend to have always on hand, a complete assortment of all the articles wanted in this line by the Farmer and Gardener. No pains will be spared to procure articles of the best quality No seeds will be offered but such as are undoubtedly fresh and genuine—raised in the best establishments of this and foreign countries. The implements will embrace all the newest and most approved kinds, from the best manufacturers in the country.

Fruit and Ornamental Trees, Shrubs, Plants, &c., will be furnished to order from one of the best establishments in the country —the well known Mount Hope Nurseries.

The principal conductor of this establishment has had many years *practical experience* in the business, in Rochester; and being well known to a large portion of the agriculturists of Western New-York, the undersigned hope, by devoting constant and careful attention to the management of their business, to merit and receive a liberal share of patronage. Farmers and others interested, are requested to call at the Genesee Seed Store, or on their agents. RAPALJE & BRIGGS.

Rochester, April 1, 1846—1t.

AGENTS FOR THE ABOVE.

Messrs Elliot & Towsey, Syracuse;
Mr. —— Lawrence, Druggist, Geneva
Messrs. H. O. Hays & Co., Canandaigua;
Joseph Osborn, Seneca Falls;
John Opdike, Waterloo;
Joseph Annin, Le Roy;
Messrs. Nickerson & Payn, Albion;
Wm. H. Peas, Buffalo.

MOUNT HOPE BOTANIC GARDEN AND NURSERIES, ROCHESTER.

SOUTH ST. PAUL-ST, NEARLY OPPOSITE THE CEMETRY.

THE Proprietors of this establishment offer for sale an unusually large and fine collection of *Fruit and Ornamental Trees. Flowering Shrubs, Roses, Herbaceous Plants, Double Dahlias, Bulbous Roots, Grape Vines, Raspberries, Strawberries, Gooseberries, Asparagus Roots, Rhubarb, Hedge Plants, Green House Plants. &c., &c.*

The collection of fruit trees comprises the most popular varieties cultivated, and have been grown with the greatest possible care to insure accuracy.

The proprietors are *practical, experienced nurserymen*, and devote their entire attention to the business. All the important operations are performed under their inspection. Experience has fully proved that trees grown at this point, in addition to being free from diseases, are better adapted to cold climates than those of any other portion of the United States.

The collection of *Apples*, includes several thousand fine trees, of the famous new American Apple, the "Northern Spy."

A large assortmeut of *Pears* of the choicest kinds are propagated on quince stocks, for garden culture, as dwarfs and pyramids, and will bear the first and second year after planting. A lot, of extra size, for immediate bearing, are now offered.

The collection of *Ornamental Trees* is large, and includes a few hundred of the splendid *Pawlonia Imperialis*. The catalogue of *Roses* embraces the most beautiful of the new varieties of the several classes, hardy and tender. A choice variety are propagated as standards or Tree Roses, 4 to 6 feet high, very fine. Of *Double Dahlias*, the assortment is unsurpassed—including the finest show flowers introduced to this country, and many that were imported last season, at 5 guineas each—a separate catalogue will be published in April. The stock of *Green House Plants* is very extensive, and includes the most beautiful new Pelargonium, (Geranium) Fuchsia, camellia *roses*, calceolaria, verbena, cactus, &c. All are finely grown, and are offered at greatly reduced prices.

Trees and Plants packed in the best manner, and shipped to any part of the country agreeable to order.

Priced catalogues sent *gratis* to all post-paid applications.

☞ Orders from unknown correspondents, must be accompanied with a remittance or a reference.

ELLWANGER & BARRY.

Rochester, April 1, 1846—1t.

POUDRETTE.

THE Lodi Manufacturing Company have on hand freshly manufactured poudrette, of the first quality, for sale in the city of New-York, at the following prices, viz:

From one to six barrels, inclusive $2.00 per barrel.
" seven and upwards, 1-75 "

delivered in New-York, free of cartage and other expense.

At the factory, on the Hackensack river, where vessels drawing eight feet of water may go, at the rate of $1.63 a barrel, or 35 cents per bushel

This manure is not only the cheapest and best in use, but also is less dangerous to use than some others. Two barrels or eight bushels will manure an acre of corn. Instructions sent *gratis*, with pamphlet when required. Letters (post-paid) addressed to the Lodi Manufacturing Co., 51 Liberty-st., New-York, enclosing the money, will be immediately attended to, or it may be obtained by application at the office of the company. April 1—2t [2]

FRUIT TREES.

FOR sale, a collection of fine *Apple Trees*, comprising 50 choicest sorts; also upwards of 200 distinct varieties of *Pear Trees*; also *Cherries, Apricots*, and *Plums*.

When the order comprises 100 trees, the prices will be for apples, 15 cents; for pears on free stocks for standards, 30 cents; ditto on quince stocks for dwarfs, 20 cents. For any less number than 100 trees in an order—apples, 20 cents; pears, 37½ cents; do. on quince, 25 cts.; apricots, 50 cts; plums, 37½; cherries, 37½ cents. Apply (*by etter post paid*) at the Fruit Plantation of Lloyd N. Rogers, near Baltimore, to THOS. TURNER, Manager.

April 1—2t.

FARMS FOR SALE.

I OFFER for sale *cheap*, two good farms, of 150 acres each, with dairy stock, &c. The one which I occupy is in Ellisburg, the other in Pamelia. Or I will exchange them for a good farm of equal value, in a good and healthy location, from 3 to 6 degrees farther south, a milder climate being desirable.

DANIEL ROUNDS.

Ellisburgh, Jefferson Co., April 1, 1846 —2t*

NEW-YORK AGRICULTURAL WAREHOUSE.

FARMERS, Planters, and Gardaners will find the *largest and most complete* assortment of Agricultural Implements of all kinds at this establishment, ever offered in the New York Market. Most of these implements are of new and highly improved patterns, warranted to be made of the best materials, put together in the strongest manner, of a very superior finish, and offered at the lowest cash price.

Among these implements are upwards of FIFTY different kinds of Plows, manufactured by Ruggles, Nourse & Mason, of Worcester, Mass., also in New-York—for the south as well as for the north; Harrows, of different patterns and sizes; Rollers of wood and cast iron, on a new principle; Seed-sowers for all kinds of seeds, a recent invention; Cultivators, with different kinds of teeth; Horse Powers of wood or of cast iron, very strong and superior; Grain Threshers; Fanning Mills; Mills for grinding corn, &c., a new invention; Corn Sheller, for hand or horse power, the latter shelling 200 bushels of ears per hour; Vegetable Cutters, will cut a bushel of roots for cattle in two minutes; Hay, Straw, and Corn-stalk cutters; Scythes, Rakes, Shovels, Spades, Hoes,—indeed Field and Garden Toools of all kinds.

Castings for the various kinds of plows manufactured in Worcester and New-York.

Seeds for the Farmer and Gardener.—A choice assortment of the various kinds, such as improved Winter and Spring Wheat, Rye, Barley, Oats, Corn, Beans, Peas, Rutabagas, Turnep, Cabbage, Beet, Carrot, Parsnep, Clover and Grass seeds, and improved varieties of Potatoes.

Wire-Cloths and Seives.—Different kinds and sizes constantly on hand.

Fertilizers.—Peruvian and African Guano, Bonedust, Lime, Plaster of Paris, &c.

Fruit and Ornamental Trees and Shrubs.—Orders taken for these, and executed from a choice of the best nurseries, gardens, and conservatories in the United States.

Horses, Cattle, Sheep and Swine.—Orders executed for stock of all kinds, to the best advantage.

A *Descriptive Catalogue.*—This will be sent to any one *gratis* upon application, *post paid*, to the subscriber. It comprises nearly 60 pages, and is illustrated with a great variety of wood cuts

Agricultural Books.—A general assortment of all kinds.

A liberal discount made to dealers. A. B. ALLEN,
April 1—1t. No. 187 Water-street, N. Y

PATENT AGENCY, AT WASHINGTON, D. C.

ZENAS C. ROBBINS,

Mechanical Engineer, and Agent for procuring Patents,

WILL prepare the necessary drawings and papers for Applicants for Patents, and transact all other business in the line of his profession, at the Patent Office. He can be consulted on all questions relating to the patent laws and decisions in the United States or Europe. Persons at a distance desirous of having examinations made at the patent office, prior to making application for a patent, may forward (post-paid, enclosing a fee of five dollars) a clear statement of their case, when immediate attention will be given to it, and all the information that could be obtained by a visit of the applicant in person, will be promptly communicated.

All letters on business *must be* post paid, and contain a suitable fee, where a written opinion is required.

Office on F. street, opposite the Patent Office

He has the honor of referring, by permission, to
Hon. Edmund Burke, Commissioner Patents;
Hon. H. L. Ellsworth, late " "
Col. H. H. Sylvester, Ch. Clk. Pat. Office;
H. Knowles, Machinest, Pat. Office;
Judge Cranch, Washington, D. C.;
Hon. R. Choate, Massachusetts, U. S. Senate
Hon. W. Allen, Ohio;
Hon. D. R. Atchison, Missouri;
Hon. Willis Hall, New-York;
Hon. Robert Smith, M. C., Illinois
Hon. S. Breese, U. S Senate;
Hon. J. J. H. Relfe, M. C., Missouri;
Capt. H. M. Shreeve, Missouri.

April 1—1t*

DUTCHESS AGRICULTURAL INSTITUTE.

THE summer session of this institution commences the first week in April, under direction of the subscriber, at the *Wilkinson Premium Farm*, in the Western Valley of Union Vale, 12 miles east of Poughkeepsie.

The course of studies in this institution is such as to give every facility for acquiring a most thorough knowledge of scientific and practical agriculture, with the use of the best modern improved implements. Instruction in physics, with lectures on those natural sciences requisite to constitute a perfect agricultural education, will be under the care of teachers amply qualified. and of tried experience. A select *Farmer's Library* with numerous agricultural papers and periodicals is also provided for the general benefit. The labor performed by the students is under the immediate supervision of the principal who superintends all farm operations.

A course of lectures will be delivered on each of the Domestic Animals, commencing with the Horse, during which a perfect skeleton will be at hand.

The farm contains 220 acres of land, embracing a great variety of soil. The location is pleasant and healthful. The buildings are extensive and commodious, for such an institution; the house 106 by 30 feet.

A conveyance runs regularly to and from Poughkeepsie, on Wednesdays and Saturdays, for the mail and passengers, and the general convenience of the institution.

Students attend church at such places as their parents or guardians may direct.

Students received during the whole season of farm work, the year reckoning in each case from the day of arrival. No student received for less than one year. Fee for the year $200, which includes tuition, board, with beds and bedding, washing, and ordinary mending, fuel and lights.

This Institution is under the patronage of the American Agricultural Association, the Farmers' Club of the American Institute, and the Agricultural Society of Dutchess.

For further particulars address the Principal and Director of Farm operations, Poughkeepsie Post Office, Dutchess County, New-York. JOHN WILKINSON.

REFERENCES.

Board of American Institute;
Board of the American Agricultural Association;
Rev. L. M. Vincent, New-York;
John L. Mason, Esq., " "
Prof. Cyrns Mason, " "
John Van Wyck, New Hamburg, Dutchess County;
Rev. Abraham Polhemus, Hopewell, " "
Charles Bartlett, A. M., Principal Collegiate School Poughkeepsie;
Rev. H. G. Ludlow, Poughkeepsie;
Gen. Thos. L. Davies, President of the Bank of Po'keepsie;
Wm. A. Davies, Esq., Pres. of Farmers' and Manuf's Bank;
Henry S. Richards, Esq, Poughkeepsie;
Rev. S. Mandeville, La Grange.

April 1—2t.

ORANGE COUNTY SCIENTIFIC AND PRACTICAL AGRICULTURAL INSTITUTE.

THE design of this Institute is to afford the most efficient means for the acquisition of a combined scientific and practical knowledge of Agriculture.

A number of farmers residing in the same neighborhood in the town of Montgomery, from 7 to 9 miles west of Newburgh, having united under a written contract one with the other to become instructors to such pupils as may be committed to their care, through the undersigned, their officers, present the Institute to the attention of the public.

Each pupil will be under the practical instruction of the member of the association with whom he may reside.

The Scientific instruction will be under the care of Mr. JAMES DARRACH, a graduate of Yale College, a gentleman of scientific attainments and in common with his associates, the holder of his own plow.

This part of the institution will embrace most of the academic studies, Natural History, and principles of Agricultural Economy.

The peculiarity of this Institute, which recommends it to parents, is, that the practical instruction will be given by practical farmers whose duty and interest compel them to attend to the economy as well as the general management of a farm.

It presents also the following features: family discipline and care; constant companionship with the instructors; varied husbandry and soil which the pupils will be constantly directed to observe and compare. In the neighborhood are places of worship within convenient distance for all to attend, Episcopalian, Presbyterian, Reformed Dutch, Scotch Presbyterian, and Methodist.

TERMS—$125 per annum for tuition and board, payable semi-annually in advance.

Mail and other stages that pass over the Newburgh and Cehocton Turnpike connect our places daily with Newburgh.

This Institute will open for the reception of pupils on the 18th April.

Enquiries and applications may be addressed to either of the undersigned at Coldenham, Orange county, N. Y.

LINDLEY MURRAY FERRIS, Prest
SAMUEL WAIT, JR., Secretary.

References.—Frederick J. Betts, Esq., President of the Orange County Agricultural Society, John Caldwell, Esq, Salisbury, Orange Co., A. B. Allen, Esq., Editor of the American Agriculturist, William Partridge, Merchant, New-York.

April 1, 1846.

TREATISE ON MILCH COWS.

PUBLISHED on the first day of April, 1846, a Treatise on Milch Cows, whereby the quality and quantity of milk which any cow will give may be accurately determined by observing Natural Marks or External Indications alone; the length of time she will continue to give Milk, &c., &c. By M. FRANCIS GUENON, of Liborne, France. Translated for the Farmers' Library, from the French, by N. P. TRIST. Esq, late U. S. Consul at Havana, with Introductory Remarks and Observations on the

COW AND THE DAIRY,

by JOHN S. SKINNER. Editor of the Farmers' Library, illustrated with numerous engravings.

☞ Price for single copies, neatly done up in paper covers, 37½ cents. Full bound in cloth and lettered, 62½ cents. The usual discount to Booksellers, Agents, Country Merchants, and Peddlers.

Farmers throughout the United States may receive the work through the mails. The postage on each copy will be about 7 cents. By remitting $2, free of postage, we will send *seven copies* of the work done up in paper covers.

Country merchants visiting any of the cities can procure the work from Booksellers for those who may wish to obtain it. Please send on your orders. Address

GREELEY & McELRATH, Publishers,
April 1—3t Tribune Buildings, New-York.

ROCHESTER SEED STORE AND WAREHOUSE FOR FARMING TOOLS,

Nearly opposite the Market, Front-st., Rochester, N. Y.,

BY JAMES P. FOGG.

THE co-partnership heretofore existing under the firm of B. F. Smith & Co., was dissolved on the first day of January, 1846. The subscriber having purchased the interest of Mr. Smith, will continue the business as heretofore, on his own account

The subscriber is well aware of the important relation which the seedsman holds to the whole farming community, and that upon his honor and veracity the crop and profit of a season in some measure depend. The greatest care has been used in selecting the seeds offered at this establishment for the ensuing year, and they can be relied upon as pure and genuine, carefully selected and raised from the very best varieties, and properly cured. Many kinds were raised in the immediate vicinity of this city, by Mr. C. F. Crosman, and under the inspection of the proprietor; others were raised by experienced growers; while those varieties of foreign growth, which experience has shown are the best, such as Cabbage, Cauliflowers, Brocoli, all the varieties of Garden and Field Turnep, Scarlet Short-Top Raddish, Scarlet and White Turnep Raddish, Dwarf and Early Peas, with twenty choice varieties of FLOWER SEEDS, have been imported by the subscriber from the long established house of R. WRENCH & SONS, of London.

FIELD SEEDS.

Red and White Clover, Timothy, Barley, Seed-Corn, Italian and Siberian Spring Wheat, Early June Potatoes, Marrowfat and other Field Peas, Rye-Grass, Orchard-Grass, Lucerne, &c., &c.

VEGETABLE GARDEN SEEDS.

A choice and select variety of Peas, Beans, Cabbage, Cauliflower, Celery, Beets, Cucumbers, Melons, Raddish, Squash, Herb-seeds, &c.

FLOWER SEEDS.

The collection of Annual aod Perennial Flower Seeds, contains many new and choice varieties.

AGRICULTURAL AND HORTICULTURAL TOOLS.

At the Ware-Room, adjoining the Seed Store, may be found an extensive and complete assortment of Agricultural and Horticultural Implements, embracing almost every tool used in the cultivation of the Farm and Garden.

SUPERIOR PLOWS.

The celebrated Massachusetts Plows, of three sizes. Several hundred of these Plows, have been sold in Rochester, and vicinity, and have given entire satisfaction. Also, Delano's Diamond plow, Subsoil and Side-hill Plows—The Gang-Plows—Two Horse Cultivators, for working summer-fallows, and getting in wheat. Corn Cultivators, Root-Cutters, Corn-Planters, Drill-Barrows, Hoes, Shovels, Scythes and Snaths, Garden-Rakes, Corn-Shellers, Straw Cutters, &c., &c.

JAMES P. FOGG,
of the late firm, and successor to B. F. Smith & Co.

Agents for the sale of Rochester Seeds by the pound, &c.

Buffalo, W. & G. Bryant—Batavia, L. Seaver—Lockport, L. H Marks & Co.—Albion, Nicholson & Paine—Brockport, A. B. Bennett—LeRoy, Tompkins & Morgan—Scottsville, Garbutt & Co.—Mount Morris, R. Sleeper—Dansville, H. B. Williams & Son—Geneseo, L. Turner—Canandaigua, L. C. Cheney & Co.—Palmyra, Hoyt & May—Oswego, C. & E. Canfield—Geneva, Hemiup & Cone—Waterloo, T. McClintock—Auburn, Wm. Hughes—Syracuse; Foster & Nott—Utica, J. E. Warner & Co., —Homer, Wm. Sherman & Son—Amsterdam, J. W. Sturtevant—Schenectady, D. L. Powell—Troy, J. Daggett & Co.—Ballston, E. W. Lee—Lansingburg, R. Harrison—Pittsfield, Mass., Isaac C. Cole—Springfield, Benj. R. Blight—Westfield, Jessup & Co.—Hudson, W. & G. Storrs.

Rochester, April 1, 1846—2t.

PLOWS.

FOR list of Plows for sale at the ALBANY AG. WAREHOUSE. 23 Dean-st., see Cultivator for Feb., 1846, page 72. Agricultural Implements of all kinds, for sale at the same place.

March 1, 1846. E. COMSTOCK & Co.

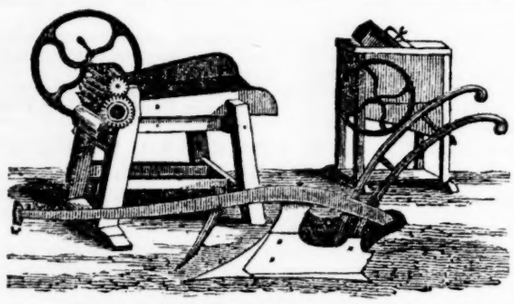
PRINCE'S MANUAL OF ROSES.

PRICE 50 CENTS.

THE new and improved edition of this work will be issued the present week. It comprises the most complete history of "*The Rose*," and of the all branches of this most interesting family that has ever appeared in Europe or America. Every variety that is comprised in any English or American work on the subject, is described in this, together with an immense number of the splendid new varieties that have not been noticed in any other previous publication. The most ample information is also given as to culture and propagation of all classes of "The Rose."

Published by the author, Wm. R. Prince, Clark & Austin, Saxton & Miles, Wiley & Putman, and Swords, Stanford & Co. New-York.

New-York, April 1, 1846—1t



PROUTY & MEARS, BOSTON,

CELEBRATED, highly approved, and unequalled CENTER DRAFT PREMIUM PLOWS—for sale at their *sole agents'*,

JOHN MAYHER & Co.'s

Agricultural Warehouse, 195 Front-st., near Fulton, New-York.

The subscribers have just received a large assortment of Prouty & Mear's celebrated and highly improved CENTER DRAFT PLOWS, which are in every way *superior to all others now in use;* and having been appointed sole agents for the sale of the same in the city of New-York, we invite the public to call and examine for themselves, as the above plows cannot be obtained at any other establishment in the city. Dealers and others in the country supplied on the most reasonable terms.

We also wish to inform merchants and farmers that we have constantly for sale plows of our own manufacture, and all others now in use.

The following is a list of prices of some of the plows manufactured by us.

A No. 1,	Worcester	patent,	.....	$1 50
A " 2,	"	"	.....	2 00
A " 3,	"	"	.....	2 50
2 B	"	"	.....	3 50
2 B	"	"	with colter, ...	4 00
Eagle, No.1,	"	"	.....	4 50
" "	"	"	with colter, ...	5 00
" " 2,	"	"	.....	5 00
" " 2,	"	"	with colter, ...	5 50
Meadow C	"	"	.....	5 50
" "	"	"	with colter, ...	6 50

Castings to fit the Worcester Ploughs, 3¼ cents per pound.

We likewise have for sale the most extensive assortment of *Agricultural Implements* ever offered in this city, most of which are new and highly improved patterns, warranted to be made of the best materials, and of very superior finish, among which are the following:

Pitts' Corn and Cob Crusher,
Hussey's " "
Sinclair's " "
Hussey's Reaping Machine,
Bark Mills, 4 sizes,
Coffee " "
Corn Shellers of all kinds,
Horse Powers " "
Threshing Machines "
Subsoil Plows, of the most approved kinds,
Cultivators of the most approved kinds,
Sinclair's Stalk and Straw Cutter,
Hovey's " " "
Stevens' " " "
Greene's " " "
I. T. Grant & Co.'s Prem. Fan Mills,
Clinton's Prem. Fan-Mills,
Rice's " "
Holmes' " "
Store Trucks, Wheelbarrows,
Mule Waggons, &c.. &c.,

Langdon's much approved Cultivator Plows or Horse Hoe. All kinds of plow castings constantly on hand. All the above articles are offered for sale on the most reasonable terms. Castings of all kinds made to order.

JOHN MAYHER & Co.,
195 Front-st., N. Y.

N. B. *Beware of Imposition.* Any person offering plows for sale, and representing them to be of our manufacturing without the full name "J. MAYHER & Co.," on the mouldboard and beam of the plows, are guilty of a *false representation.* as no person in the city and county of New-York has the genuine article for sale but ourselves. April 1—tf [2] J. M. & Co.

"MANHATTAN AGRICULTURAL STORE."

PLOWS manufactured, and plow castings of all kinds made to order at low prices—a general assortment of agricultural machines. J. PLANT, No. 5 Burling Slip, N. Y.

"MANHATTAN AGRICULTURAL STORE."

J. PLANT, No. 5 Burling Slip, New-York City.

ORDERS for the *genuine* "Warren Patent (latest) Improved Horse Powers and Threshers," promptly attended to by the sole proprietor, (J. Plant,) viz:—

One Horse Power alone—price, ...	$40 00
Two " " " "	50.00
Four " " " "	75.00

One, two, and four horse Threshers—price, $20, $25, and $30. Liberal discount to dealers.

AGRICULTURAL WAREHOUSE,

By Ezra Whitman, Jr., 55 Light-street, Baltimore.

THE proprietor of this establishment is the sole agent in Baltimore and vicinity, for the sale of the following *new* and valuable improvements, viz:

Whitman's improved Rail-way Horse-Power and Threshing Machine, which threshes and cleans the grain at one operation.

Prouty and Mears' Centre Draft Plow.

" Hovey's Premium Straw Cutter.

I. T. Grant & Co.'s Premium Fan-Mill.

Douglass' Premium Pumps, which are so constructed as to prevent freezing in the coldest of weather.

Rogers' Mill, for cutting and grinding corn stalks.

Together with a general assortment of the *latest* and most *approved* agricultural implements, constantly on hand, and manufactured to order. EZRA WHITMAN.

Baltimore, Nov. 14, 1845.

BURRALL'S CORN SHELLER.

THE subscribers are now fully supplied with this valuable Sheller so as to be in readiness hereafter to fill orders for any number, without delay. A further trial during the last month has fully established the superiority of this over all other Shellers for hand power. For description, engraving, &c., see Cultivator for February, page 60. Retail price $10, with a liberal discount at wholesale. E. COMSTOCK & Co.

Albany Agrl. Warehouse

March 1st, 1846.

DURHAM BULL FOR SALE.

THE subscriber (not having sufficient use for him,) offers for sale his imported, thorough bred Durham Bull, "Prince Albert,"

He is five years old—a roan, of medium size —quiet in temper, and easily managed. For a portrait and description of this bull, see the August number of the Cultivator, and for his pedigree see the British Herd Book, vol. IV., page 382. His sire was the celebrated bull, "Sir Thomas Fairfax."

If not previously sold, he will be will be offered for sale at the next show of the New-York State Agricultural Society.

Letters on the subject may be addressed to the subscriber at Red Hook, Dutchess county, N. Y., where the bull can be seen.

Jan. 1, 1846.—tf ROBERT DONALDSON.

VALUABLE FARM AND COUNTRY SEAT FOR SALE.

THE subscriber offers for sale the Farm on which he now resides, situate in Southwick, Hampden county, Mass. The road from Hartford to Northampton, via Westfield, along which a mail coach passes daily, and nearly through the centre of the Farm, which contains about 400 acres, nearly half of which is wood land, heavily timbered. It is bounded on one side by the Farmington canal, which renders the communication with New-Haven, an excellent wood market, easy and expeditious. The buildings are a mansion house, with a wing, the latter new, making a front of 70 feet. Also a house for a tenant; three large barns, nearly new, covered with pine and painted; a corn house, carriage house, sheds, &c. Great pains have been taken in selecting and cultivating choice fruit, and there is now on the Farm, in full bearing, a great abundance of the best varieties of apples, cherries, peaches, &c. A part of the land is of superior quality, and on almost every lot is living water.

Tariffville, a larg manufacturing village, seven miles distant, affords a ready market for wood and every kind of produce, raised on a farm. This is one of the most valuable and desirable locations in the country, not only for farming purposes, but for the gentleman of leisure. A large portion of the purchase money, if desired, can remain for a term of years. I will sell the whole together, or in two parts. Letters of inquiry addressed to me, will receive prompt attention, or inquiry can be made of LUTHER TUCKER, Albany, or of R. SHURTLEFF, Springfield.

ROGER S. MOORE.

Southwick, March 1, 1846.—3t

100 DOZEN CAST STEEL HOES.

THE subscribers have on hand an elegant assortment of Cast Steel Hoes, highly polished, and finished in the best manner. Among them 50 dozen made by Henry Tower, of Milbury, Mass., of four or five different numbers and prices. Also several other kinds of neck and eye hoes. Merchants and others dealing in hoes are invited to examine them. E. COMSTOCK & Co.

Albany Ag. Warehouse, March 1, 1846.

ASPARAGUS ROOTS, two years old and of very thrifty growth, for sale by ISAAC ROOSEVELT,

March, 1846.—2t Pelham, Westchester Co., N. Y.

FIELD-SEEDS AT THE ALBANY AGRICULTURAL WAREHOUSE.

300 BUSHELS BLACK SEA WHEAT, both red and white varieties.
200 bushels Italian wheat.
200 " Marrowfat Peas.
75 " Black-eyed Peas.
100 " Canada Peas,
15 " Emir or Skinless Barley.
150 " Four rowed Barley.
250 " Two rowed Barley, (an uncommonly fine sample.)

CORN

"Large Dutton," 12 rowed;
"Improved Dutton," 12 rowed, raised by S. W. Jewett, Vt.;
Long 8 rowed yellow;
Madawasca or early Canada;
White Flint, (long ears,)
Small White Flint.

CARROT

100 lbs. Large white;
150 " Long Orange.

TURNEPS.

350 lbs. Ruta-baga or Swedish;
100 " Large English Norfolk;
100 " White flat, or winter.

GRASS SEEDS.

Timothy, best quality,	Orchard Grass,
Northern Red Top,	Southern Red Top,
Large Northern Clover,	Western Medium Clover,
Lucerne or French Clover,	White Dutch Clover.

All the above may be had of best quality, at the Albany Agricultural Warehouse and Seed Store, 23 Dean-st.

March 1. E. COMSTOCK & Co.

BUFFALO NURSERY AND HORTICULTURAL GARDEN.

THIS nursery was commenced upwards of twenty-five years ago, and now contains a very large number of the most choice and proved varieties of select fruits: together with a fine collection of ornamental Trees, Flowering Shrubs and Plants.

Individuals wishing to forward Trees to the Western States, will, perhaps, find it to their advantage to purchase here. The stock of choice and select Apple Trees (comprising 1500 of the most noted varieties) is now very large and fine. Prices very moderate.

His descriptive Catalogue, a pamphlet of 40 pages, forwarded gratis, to every applicant. Trees packed in superior order, and forwarded with dispatch. Orders will receive the most prompt attention. B. HODGE.

Buffalo, N. Y., March, 1846.—2t*

STODDARD'S SEEDLING STRAWBERRY.

PPANTS of this new seedling may be obtained on the opening of the ensuing spring season, of the original producer, J. S. STODDARD, Palmyra, N. Y. The superiority of this variety of the Strawberry, in respect both to quality of fruit and certainty and bountifulness in bearing, has been fully demonstrated by a number of years trial. Inquirers are referred to an editorial notice in the Cultivator of August last, p. 251. Plants will be put up in a secure manner, and may be sent by express or otherwise to almost any part of the country, or to Europe. Price $5 for 50 plants. All orders must be accompanied by the cash, (post paid if by mail,) and should be addressed to the proprietor as above.

Palmyra, March 1, 1846.

PATENT PREMIUM FAN-MILLS.

I. T. GRANT & Co., still continue to manufacture the celebrated Improved Patent Fan-Mills, at the old stand, Junction, Rens. Co., N. Y. These mills have taken the *first premium* at the following places:—New-York State Fair, at the Institute, New-York, the State Fair, at Pennsylvania, and the State Fair at Maryland. The subscribers have no hesitation in saying that these mills surpass anything of the kind ever offered in market. They are the only mill that has ever been produced that will chaff and screen wheat perfectly clean in one operation.

We also manufacture *Grain Cradles* of the very best quality, which have taken the first premium at the New-York State Fair. They are for sale at factory prices, at the following places:—

A. B. Allen's, 187 Water-st., New-York;
D. L. Clawson's, 191 " "
E. Comstock & Co.'s, Albany;
H. Warren's, Troy; and
Viall & Warren's, Mechanicsville, Saratoga Co., N. Y.

All orders thankfully received and punctually attended to. All goods delivered at Troy, N. Y., free of charge.

I. T. GRANT, &Co., Junction P. O., Rens. Co., N. Y.

Feb. 1—tf [2]

GARDEN SEEDS.

THE subscribers have now on hand a full stock of choice garden seeds, which can be furnished to dealers or to growers and gardeners in any quantity, either in small papers or in large packages. They would solicit especial attention to this branch of their establishment, as they mean at all times to be supplied with the choicest seeds to be had in this country or Europe.

E. COMSTOCK & Co.
Albany Agrl. Warehouse, No. 23 Dean-st.

March 1, 1846

PRINCE'S LINNÆAN BOTANIC GARDEN AND NURSERIES

Flushing, L. I., near New-York.

WM. R. PRINCE & Co., offer for sale their unrivalled collection of Fruit and Ornamental Trees, &c. The entire Fruit Department is carefully scrutinized by them personally, and ingrafted from the largest collection of bearing specimen trees in the Union, and they challenge a comparison in accuracy with any establishment in Europe or America. Purchasers are solicited to inspect their trees and witness their superior size and vigor. The preeminence claimed can be readily tested by sending duplicate orders to them and to any other nursery. They have 3000 extra sized Pears, (on Pear and Quince,) 8 to 12 feet, with heads, very strong and suitable for immediate bearing, and 10,000 Pears, 5 to 8 feet, and 2000 for Dwarfs, or en Quenouille. Also Plums, and Apricots on Plum of the same sizes, and a large stock of the finest Apples, Cherries, and Peaches, the latter very low by the hundred or thousand. 10,000 Quinces 3 to 6 feet. 5,000 Lancashire Gooseberries, assorted. Victoria and other Currants. Fastolfs, Franconia, and other Raspberries, at low rates. Of Grapes, the assortment comprises all the most celebrated and *carefully selected* foreign varieties. The collection of Roses is the largest in the Union and comprises 70,000 Plants of 1,300 varieties, embracing every novelty that could be selected from ten of the largest collections in Europe, and the plants are much larger than are usually sold. 10,000 Magnolias, 3 to 10 feet; 20,000 Evergreen trees, of every class and size; 50,000 Hawthorns and Privets for hedges; 50,000 large Dutch Asparagus, and 5000 Tobolsk, Victoria, and Leviathian Rhubarb. Of Ornamental Trees, they have above 200,000 of every class and size, including 1000 splendid Paulownia Imperialis, 6 to 8 feet. The purchasers may save two years by the superior size of their trees and shrubbery. Priced Catalogues sent to every post-paid applicant.

March 1, 1846.—2t.

ARE sold at the *Seed and Implement Warehouse* of the subscriber, No. 65 Chestnut-st., Philadelphia.

DAVID LANDRETH.

*** Country merchants, and other dealers, will observe that the above seeds are essentially distinct from those obtained by foreign importation, or chance purchase at home, which are at best uncertain. Supplies can be had in bulk, or in retail papers, each bearing the advertiser's label and warranty.

Extract from the "Report" of the Visiting Committee of the Pennsylvania Horticultural Society;" unanimously adopted, and ordered to be printed.

"LANDRETH'S NURSERIES AND GARDENS."

"These extensive grounds are on Federal street, near the Arsenal. * * * The earliest collection of Camellias was made here. Some of those now in the possession of those distinguished nursery-men, are ten feet high. * * * The selection of *green house plants* is valuable and extensive. * * *

"The nurseries are all *very correctly managed*, supplying every part of the union, a detail of which would occupy too much of our space; we therefore content ourselves with stating that the stock is very large, and in every stage of growth, consisting of FOREST and ORNAMENTAL TREES, SHRUBS, EVERGREENS, VINES, and CREEPERS, with a collection of herbaceous plants; FRUIT TREES of the best kinds, and most healthy condition; large beds of seedling apples, pears, plums, &c., as stocks for budding and grafting; a plan very superior to that of working upon suckers, which carry with them into the graft all the diseases of the parent stock. * * *

"GARDEN SEEDS of the finest quality have been scattered over the country from these grounds, and may always be depended upon. The seed establishment of these Horticulturists is one of *the most extensive in the Union*, and its reputation is well sustained from year to year.

"To obviate the chance of mixture of the farina of the plants of the same family, they have established another nursery at a suitable distance, so that degeneration cannot take place, and which secures to the purchasers "a genuine article." Knowing thus the age, quality, and process of culture of every plant, *the supply from their grounds is recommended with great confidence.*"

*** Since the date of the "report" from which the above is abstracted, the *entire establishment* has been *greatly enlarged.* The collection of Camellias embraces all the finer kinds, and consists of some thousands of various sizes; so likewise of Roses and other desirable plants, both tender and hardy, Fruit trees, &c.

The Seed Gardens alone, cover *fifty acres*, and the whole is, as it has been for more than *half a century*, under the successive management of father and son, the *most prominent of its kind in America.*

☞ The Nursery department is conducted by D. LANDRETH & FULTON. Catalogues gratis.

Philadelphia, March 1, 1846.—2t.

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PLATT'S PATENT (LATEST) IMPROVED PORTABLE BURR-STONE MILLS.

THE 24 inch size of these Mills has recently been set up in operation in this city, *with some important improvements attached to it*, and the fact is ascertained that with less than two horse power, about 5 bushels of fine meal, and some 12 to 15 horse feed, (corn and oats) is readily and beautifully ground in an hour. Further particulars will appear hereafter. These mills, all the sizes, and patent rights in same, are for sale by the proprietor in this city. JAS. PLANT, 5 Burling slip.
New-York, April 1—1t.

SIXTH EDITION—JUST PUBLISHED,

THE FRUITS AND FRUIT-TREES OF AMERICA: Or the Culture, Propagation, and Management, in the Garden and Orchard, of Fruit Trees generally, with descriptions of all the finest varieties of Fruit, native and foreign, cultivated in this country. By A. J. DOWNING, Esq. *Sixth Edition*, with corrections. 1 thick vol. 12 mo., with numerous illustrations. $1.50.

"Full of useful information for fruit cultivators generally, as well as for those in America to whom it is more especially adapted."—*Lindley—London Gardeners' Chronicle.*

"This work will advance horticulture in the United States twenty years at one leap."—*Ohio Cultivator.*

"From the known abilities and critical observation of the author—his extensive correspondence with the most experienced horticulturists of this and other countries, and in particular for his unwearied and indefatigable labors of many years, the results of which he has given to the public in the volume under notice,—it is to be recommended as containing a greater amount of pomological information than any other American work, and as deserving the careful study and attention of the farmer, the amateur, the gardener, and all lovers of fine fruit"—*N. E. Farmer.*

"Nothing compared with it on the subject of pomology has yet been published in the United States."—*American Agriculturist.*

Also, *Downing's Landscape Gardening and Rural Architecture*; 2d edition, beautifully illustrated. 8 vo. $3.50.

Downing's Designs for Cottage Residences; 2d edition, with many engravings. 8 vo., $2.00.

Ladies' Companion to the Flower Garden, edited by A. J. Downing. 12 mo. $1.50.

Published and for sale by WILEY & PUTNAM.
April 1. 161 Broadway, N. Y.

ALBANY AGRICULTURAL WAREHOUSE,
No. 23 Dean-Street.

THE subscribers ask the attention of farmers to their assortment of AGRICULTURAL IMPLEMENTS, FIELD and GARDEN SEEDS, embracing all the varieties needed for the farm or garden. Our articles have all been selected with the greatest care and attention, and with especial reference to their adaptation to *improved* agriculture. For notice of articles see separate advertisements in this paper. But as we cannot enumerate the articles, seeds, &c., here, we shall be happy to show them to all who may call at our warehouse. E. COMSTOCK & Co.
April 1. 23 Dean-st

L. TUCKER, Esq.—I have this morning received my Cultivator, and in it I am surprised to find in a letter addressed to you by Ruggles, Nourse & Mason, my name introduced as having advertised their plows "unauthorized," and to "deceive" the public. *Such however, is not the fact* If by any advertisement of mine, I had supposed for a moment, I was entrenching on their exclusive rights, it would not be like me to allow it to appear over my name.

The fact, however, is, I had permission to sell Messrs. Ruggles, Nourse & Mason's plows, and had samples on hand, and never was restricted in any way, to my knowledge, in regard to advertising them for sale. I feel that Messrs. R., N. & M. have done me injustice by the manner they have introduced my name.

J. PLANT, 5 Burling-slip.
New-York, March 4th, 1846—1t.

EAGLE PLOWS.

THE genuine Eagle Plow, made by Ruggles, Nourse & Mason, is for sale at the Albany Agricultural Warehouse. All sizes adapted to different soils and purposes. E. COMSTOCK & Co.
April 1.

FOR SALE.

A FULL blooded Narragansett, *entire* Horse. This breed has been in the family of the late Governor Jay, for the last century. They are *rackers*, and not *pacers*. He is the only *entire* horse of the breed which is left. He is very fast; will *rack* his mile within three minutes. Horses of this breed are highly esteemed as saddle horses for gentlemen and ladies, and bring a high price. Apply to JAMES R. DEY, No. 51 Liberty-st, N. York
April 1—1t.

CENTER-DRAFT PLOWS.

THE subscribers keep for sale a full assortment of Prouty & Mears' Center Draft Plows, of all sizes and prices. Farmers in want of these plows will have them forwarded promptly by sending their orders to us. E. COMSTOCK & Co.,
April 1. Albany Ag. Warehouse, 23 Dean-st.

THE "DIAMOND PLOW," (received the 1st premium of State Ag. Society in 1844—'45,) is kept constantly on hand at the Albany Ag. Warehouse. E. COMSTOCK & Co.

THE "TELEGRAPH PLOW," a light and beautiful plow for cross-plowing, &c., as well as for green sward. A supply always on hand at the Albany Ag. Warehouse.
April 1. E. COMSTOCK & Co.

SEED AND PLANT STORE,

WHOLESALE AND RETAIL,

No. 31 Fulton-st., New-York, and Sing Sing, Westchester County, N. Y.

GARDEN and Field Seeds, Flower Seeds and Green House Plants, Clover, and other Grass Seeds, Bird Seeds, Split Peas, Garden Matts, &c. Assortments of Garden Seeds suitable for country stores, or for a southern market.

Fruit Trees; Shade Trees, either from the forest or the nursery.

Agricultural and Garden Tools of every description. Wire manufactures, &c.

Orders from a distance faithfully put up and promptly forwarded.
April 1—1t.* ALEX. WATSON.

POUDRETTE—NEW-YORK COMPANY.

A SUPERIOR article of poudrette, prepared in the most careful manner, by the New-York Company, (the first established to prepare the article, in this country,) may be had on application, either by letter or personally, at the office, 23 Chambers-street, N. Y.

☞ It is hardly necessary to say that poudrette, as a manure, where transportation constitutes a part of the cost, will be found the cheapest, as *one bushel* of it, when properly prepared, will produce as much corn, or potatoes, or *any other kind of vegetation*, as *twelve or fourteen* bushels of farm-yard manure. This has been repeatedly tested in various parts of the country.

☞ Orders enclosing the money—two dollars a barrel for *six* barrels or under—and $1.75 per barrel for *seven* barrels and over. Letters should be addressed to D. K. MINOR, Agent,
April 1.—2t* 23 Chambers-st, New-York.

AMES' SHOVELS AND SPADES, by the dozen or retail, at the Albany Ag. Warehouse E. COMSTOCK & Co.
April 1.